Who Will Train the Already Educated?

How Dual-Speed Universities Can Sustain the College-Educated Workforce

John D. Skrentny and Mary L. Walshok
University of California, San Diego

LEARNING SOCIETY

Table of Contents

Executive Summary	01
Introduction	05
The Dual-Speed Research University	09
The Market Opportunity	20
A Blueprint for Action	21
Conclusion	25
About the Authors	26

About Learning Society

Anchored at Stanford, Learning Society is a distributed narrative and research initiative advocating a paradigm shift in how the United States invests in people: from school models that center early-life classroom experiences leading to academic credentials, to learning models recognizing that human talent grows everywhere—at work, at home and at play, as well as at school—across the entire arc of lengthening lives.

Learning Society supports applied science to better identify, measure, and enable human learning wherever it occurs; fosters experiments and innovations that blur the boundaries between educational and other life experiences; and encourages strategies for sharing investment in human learning among all who benefit.

Executive Summary

American universities are in crisis—and so are American workers. Public confidence in higher education has fallen to historic lows. Student loan debt has reached crushing levels, with delinquency rates surging. Employers cannot find the skilled workers they need while millions of college graduates watch their hard-earned expertise become obsolete faster than they can replace it. Federal and state governments are demanding that universities change. University enrollment of 18-25 year olds is declining and is likely to do so for the foreseeable future.

The urgency is real. But the diagnosis driving most proposed solutions is wrong. Critics focus on what universities teach young people. The deeper problem is whom universities have decided to serve—and whom they have abandoned. Since the founding of Harvard in 1636, American higher education has organized itself almost entirely around one life stage: the transition from adolescence to adulthood. Policymakers, university leaders, and students have settled on the idea that higher education is primarily about launching careers, not sustaining them—and they have stuck with this model. Universities prepare students by bestowing degrees that are expected to be valuable across a lifetime. This expectation persists despite a steadily increasing magnitude of technological and economic disruptions that accelerate skill obsolescence, and working lives that now routinely extend into the seventies. We expect working college grads—often with families, mortgages, elder care responsibilities—to fend for themselves in skill development and labor markets, even as the predicted AI displacement gathers momentum. Who will train the already educated?

The Answer Already Exists—Hidden In Plain Sight

Many research universities already operate specialized units with design blueprints that are meeting this challenge. Known variously as extension, continuing education, professional studies, or engineering professional programs, these units serve both new and working college graduates with employer-connected, just-in-time training at accessible prices. They move at the speed of business, not the pace of faculty governance. They build programs in months, not years, and shutter them when demand wanes. They hire instructors from industry and build curricula with employer advisory boards. They measure success not by enrollment but by whether learners keep their jobs, earn promotions, and successfully navigate career transitions. We call these units career sustainers—because that is precisely what they do.

Two Missions, Two Speeds

The research universities that do this well have discovered something important: career launching and career sustaining are fundamentally different educational missions that require different organizational logics. Career launching—undergraduate and graduate degrees for young people—requires deliberate, multi-year formation to create foundational skills that support a lifetime of changing technical skills. Quality and rigor demand time. Career sustaining, by contrast, must be fast and responsive. It may build on new technologies emerging from the university's research, or it may trade on the university's trusted name to provide quality training that is widely available but in demand.

The institutions that do this best have stopped trying to make one unit do both jobs. They have built what we call a **dual-speed university**: a career-launching side that operates deliberately, and a career-sustaining side that operates entrepreneurially. The two sides are complementary—and only together can a research university serve both the eighteen-year-old beginning her career and the forty-five-year-old engineer whose skills are being disrupted by AI, 180 degree turns in federal policy, and ever-changing investor preferences.

The Market Opportunity

The market math is clear. Roughly 1.9 million recent high school graduates enroll in college each year, while 56 million college-educated adults are employed in the United States—a learning market nearly thirty times larger. The pool of traditional-age students has already peaked and is projected to decline 13 percent by 2041. Corporations already spend approximately $100 billion annually on workforce training. National Science Foundation data show that more than half of STEM workers pursue skills-related training every year—and that rate stays above 50 percent until thirty years after degree completion.

Research universities that ignore this market are choosing scarcity over abundance, abandoning their public mission, and ceding ground to corporate training providers that lack universities' most valuable assets: research depth, employer networks built over generations, and the brand credibility that makes credentials matter.

What Success Looks Like—and What Fails

When research universities treat career sustaining as a public mission, the results can be transformative. UC San Diego's partnership with Qualcomm, begun in the early 1990s, built the technical workforce that helped turn a startup into a Fortune 500 company, beginning with 46 learners and growing to support an entire regional innovation economy. Georgia Tech's $6,750 online master's in computer science, begun in 2014, now serves about 1,700 learners per year, nearly 90 percent of them already employed, with an average age of 34, without cannibalizing its residential program or compromising its reputation.

When universities treat career sustaining as a revenue mechanism, learners pay the price. Caltech settled a class-action lawsuit in 2025 after outsourcing a cybersecurity bootcamp to a for-profit vendor that left students feeling deceived and in debt. Columbia University's margin-seeking master's programs put learners on roads to nowhere with debt exceeding their earnings by four to six times. These examples show what happens when universities use career sustaining to serve campus needs, rather than learners and employers.

A Call to Action

Research universities, policymakers, employers, and philanthropies each have a role to play.

University leaders should name career sustaining as a core mission—alongside research and career launching—and protect it from being plundered for revenue when budgets tighten. Price nondegree credentials for access, not margin. Build employer advisory boards with real authority over curriculum to ensure relevance and quality.

Federal and state policymakers should expand Workforce Pell eligibility to cover rigorous noncredit certificates offered by research universities, fund mission-subsidized career sustaining through state appropriations, and create regulatory frameworks that allow the agility labor markets require.

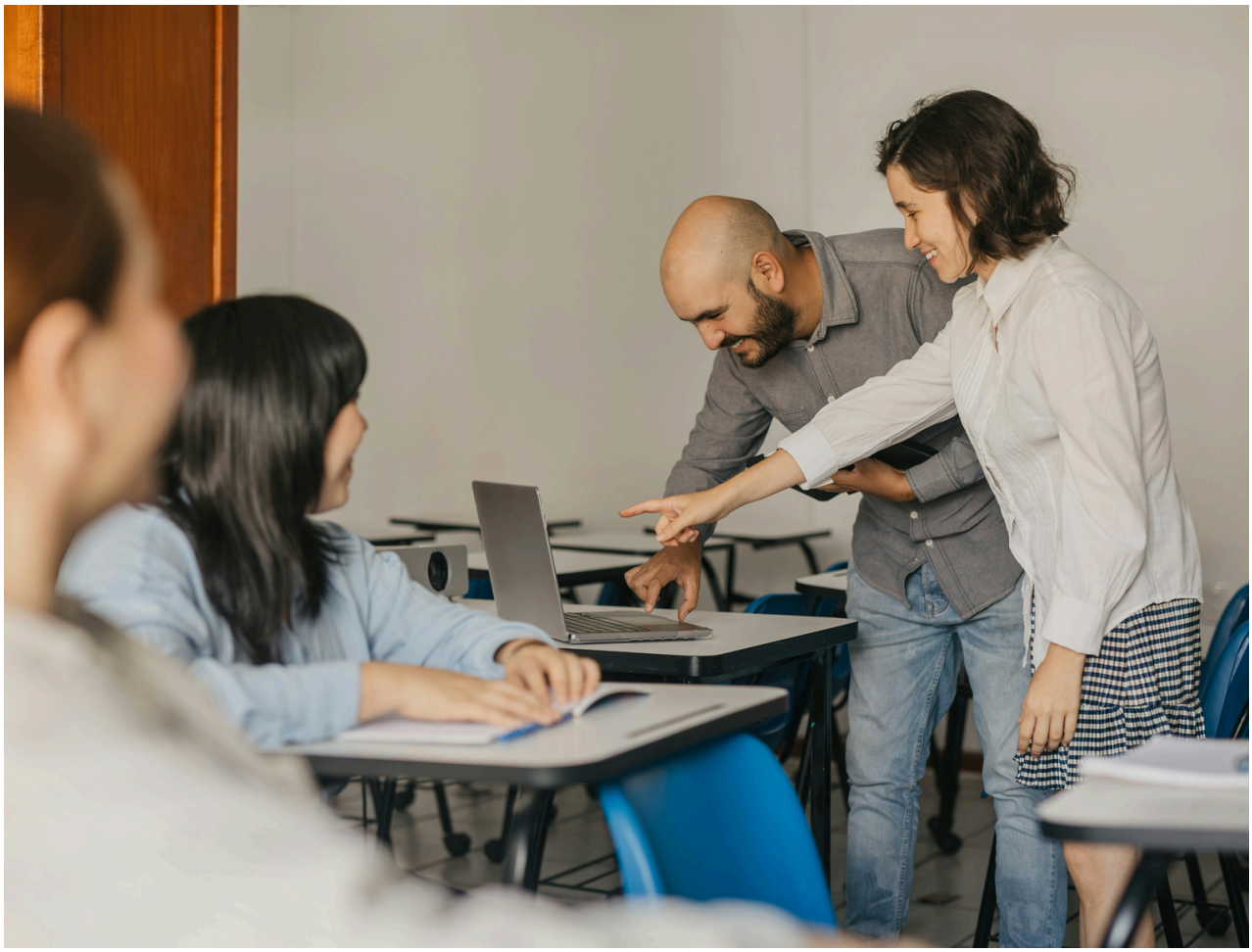
Employers and philanthropies should co-design programs rather than merely purchase them, offer workers time—not just tuition—to pursue skill development, and make their partnerships with universities visible. High-road employers and universities that keep these collaborations quiet reinforce the false narrative that universities and industry are disconnected.

The Opportunity Will Not Wait

The capacity to meet this moment exists. Career sustainers at research universities are already doing this work: at scale, with rigor, and at prices working adults can afford. They do not lack capability. They lack recognition, resources, and the institutional standing that comes from being named a core mission rather than treated as a peripheral service.

Research universities that act now—naming career sustaining as a core mission, investing in the units already doing this work, and holding themselves accountable for learner outcomes—will restore their social contract with the public and secure their own futures. Those that continue treating it as peripheral are missing a chance to create new stakeholders and may face a reckoning they are unprepared to manage.

The need is urgent. The model is proven. The only question is whether research universities will claim their role in the learning society before others claim it for them.

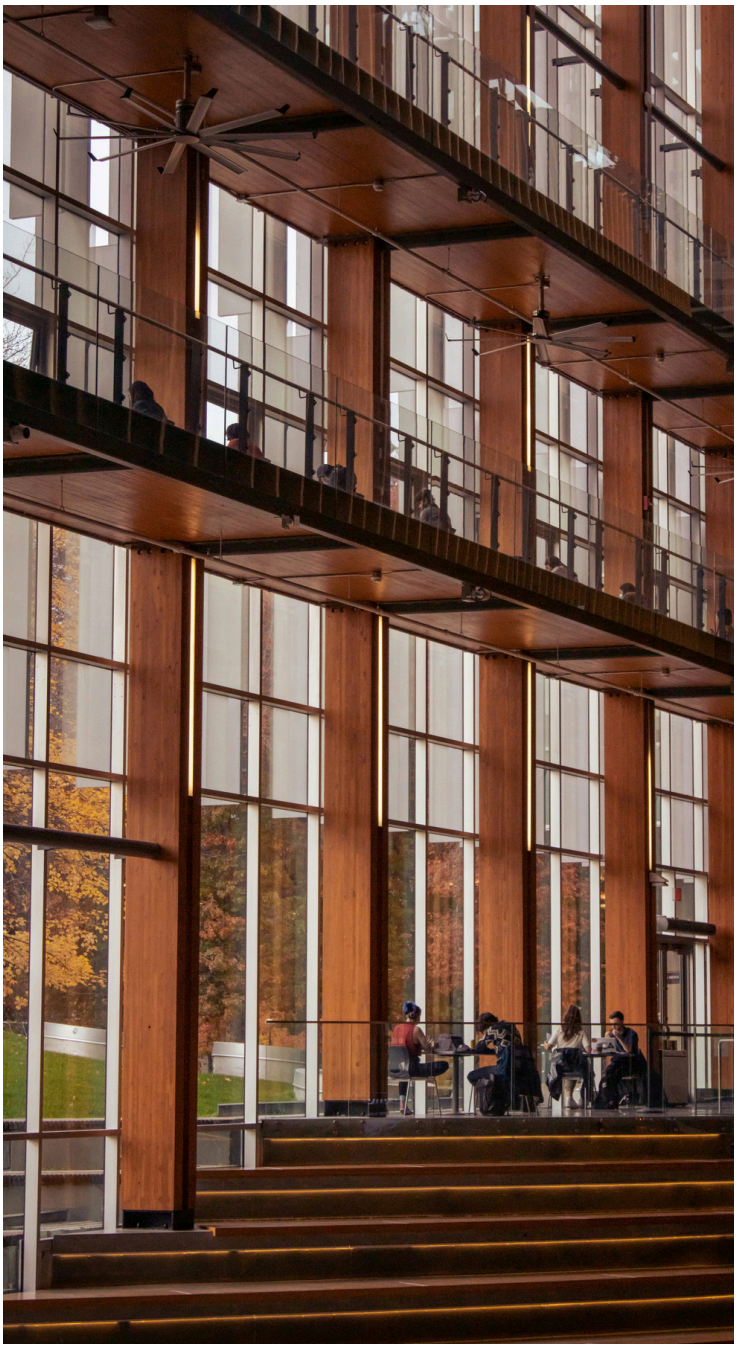


Introduction

The problems facing American universities are well known. Public confidence in them remains near historic lows. The numbers of high school graduates overall and those interested in college are shrinking. Student loan debt has grown to unsustainable levels, with unprecedented delinquency and default. Federal and state governments are demanding universities shift to new models of education for job readiness. Employers can't find the skills they need while the labor market is changing faster than traditional universities are built to respond.

But there is good news: a powerful answer to all these problems already exists within the walls of some of our greatest research universities. Many schools nationwide maintain specialized units for adult education and reskilling that are trustworthy, affordable, and responsive to the needs of regional employers. These units go by different names at different institutions: extension, continuing education, professional studies, or specialized units in engineering divisions. We call them career sustainers because that is what they do: sustain careers by providing the advanced, employer-connected training that keeps college graduates employable across decades of work.

At their best, they are entrepreneurial education innovation labs designed to operate at the speed of business while leveraging the unique assets that only universities can provide.



Sidebar: Some Definitions

Career launching: Universities in the US and globally have focused their educational mission on preparing young people for their future lives. While this mission has included developing capable citizens and well-rounded individuals, it is increasingly centered on launching students into careers. This is now the dominant purpose of undergraduate and most graduate education, and it has always been central to professional schools such as law, medicine, and business. Career launching always culminates in a degree, traditionally meant to signal career competence for life.

Career sustaining: Still marginal on most campuses today, units often called extension, professional studies, and continuing education have developed successful models for serving working college graduates. These units partner directly with employers to co-create curricula to provide just-in-time, job-relevant skills. They primarily serve college-educated workers seeking to remain competitive, advance, or change careers. Programs may lead to nondegree credentials, degrees, or no credential at all.

Dual-speed university: Career launching and career sustaining succeed under different design logics. Career launching at its best emphasizes foundational skills—critical thinking, problem solving, communication—that support long-term adaptability. Because quality and formation are central, change is necessarily deliberate. Career sustaining, by contrast, must be fast and responsive to shifting employer needs. Programs can be developed in months and sunset just as quickly when demand changes.

Career-sustaining units work because they operate separately and independently from career-launching degree programs. Research universities are powerhouses when it comes to generating new knowledge, but they are astonishingly slow to change what they teach and how they teach it in their core degree-granting divisions. A new undergraduate major can take years from proposal to first enrolled students. Graduate programs can take just as long. Faculty governance, accreditation requirements, and curricular review processes may ensure quality but create bottlenecks that make rapid response to employer needs nearly impossible.

Career-sustaining units avoid these bottlenecks by operating under different rules and shorter timelines. They create nondegree credentials—certificates, professional development programs, short courses—that can move from concept to classroom in months, not years. They commonly hire instructors from industry, ensuring relevance as they bring current expertise and current practice. They build employer advisory boards that meet regularly to co-design and then update curricula, validating that those who complete the program are job-ready.

They price programs for access using cost-recovery or mission-subsidized models, not the revenue-maximization logic that drives many master's programs. And they measure success by work outcomes: employer hiring, learner promotions, salary increases, successful career changes, or job retention when layoffs would otherwise occur.

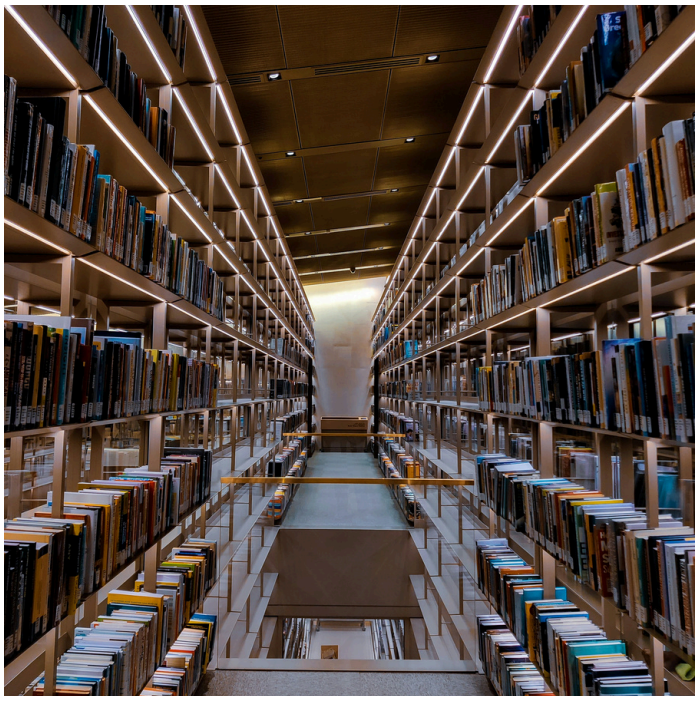
The presence of a good career sustaining unit on a campus creates a dual-speed university. The career-launching side focuses on accredited degrees. It operates slowly, on the premise that time-intensive, multi-year instruction is a good way to build foundational skills and capacities to last a lifetime. The career sustaining side operates quickly and entrepreneurially, responding to skills gaps as they emerge and closing programs when demand shifts. As university educators ourselves, we believe that both sides serve essential purposes, and that neither can replace the other. But only the dual-speed model allows universities to serve both the early-life graduate and the mid-life professional whose career will be disrupted by economic and technological change over time.

Our Research

We came to this project from very different places. John Skrentny was trying to understand why employers claimed there was a shortage of American STEM graduates when federal data showed that the majority of STEM graduates did not work in STEM jobs. He suspected that the struggle to keep skills up to date, especially for working parents, was part of the reason. A book, Wasted Education: How We Fail Our Graduates in Science, Technology, Engineering, and Math, was the result of that research, but it left unaddressed what universities could do to increase the ROI on college degrees.

Mary Walshok is a sociologist who for 40 years led UC San Diego's Extension (now called Division of Extended Studies). Working collaboratively with innovative, regional technology startups and established firms, the division developed dozens of postbaccalaureate, practice-based credentials, serving tens of thousands of adults working in new and emerging industries. These partnerships included companies such as Qualcomm, Illumina, General Atomics, and a wide range of firms in the region's technology and biotech clusters. Walshok has written extensively on the role of research universities as drivers of regional economic and workforce renewal.

With support from the Spencer Foundation and others, we embarked on a comparative study of career sustaining programs at universities across the country, with an eye to diversity of universities, geographies, and regional economies. We conducted more than 70 interviews with leaders in higher education, business, government, and civic/nonprofit organizations in multiple regions, including Atlanta, Austin, Chicago, Detroit, New York City, Pittsburgh, San Diego, and Seattle. We sought to understand how these units operate and to identify their best practices that could be emulated and scaled up—bringing American universities into realities of careers in the 21st Century.



The Dual-Speed Research University

A great strength of US higher education is its variety: community and liberal arts colleges, technical schools, and for-profit learning providers all will continue to play a role in serving the needs of a complicated human-capital system as the Fourth Industrial Revolution unfolds. In this complex and dynamic ecology, research universities combine four assets that other kinds of institutions do not.

Faculty expertise at the knowledge frontier: When mid-career professionals need to understand the latest developments in AI, biotech, cybersecurity, or advanced manufacturing, they benefit from instructors who are creating that knowledge themselves. Research university faculty are often world experts in exactly the fields where technological change is most rapid. Many create their own companies or advise the firms that are driving disruption.

Research infrastructure where new technologies are developed: Research universities are both institutions of teaching and sites of knowledge production. Their labs and research centers are where new technologies are invented, tested, and refined. Career sustainers can draw on this infrastructure in ways that give learners access to equipment, techniques, and insights—sometimes developed at a unit's home university––that may be difficult or impossible to find elsewhere.

Employer networks built on decades of research partnerships: Major research universities are anchor institutions in regional economies and hubs that bring diverse experts and publics together. They have cultivated relationships with employers over generations: relationships built on joint research projects, technology transfer, and decades of hiring their graduates. These networks are the foundation on which career sustainers build their advisory boards, co-design their curricula, recruit their practitioner-instructors, and place their learners.

Brand credibility that makes credentials valuable: Despite declining public confidence in higher education writ large, employers still trust research university credentials in ways they do not trust alternatives. A certificate from UC San Diego Extended Studies or Georgia Tech Professional Education signals rigor, quality, and institutional accountability.

This trust is built over decades and is difficult for new providers to replicate quickly regardless of quality. We believe that the reputations of great research universities are public goods that schools have a responsibility to share with learners across the life course. Universities can do this generously and well when they treat career sustaining as a coequal educational mission alongside career launching.

How Career Sustainers Deliver Impact

Career sustainers succeed when they operate entrepreneurially within institutional constraints. They use market discovery to identify opportunities, price strategically to balance access and financial viability, apply rigorous quality controls, and measure what matters.

Market Discovery: Finding What Learners and Employers Need

Effective career sustaining is mission-driven, but operates like a business. In a parallel with the "lean startup" playbook, they draw constantly from many sources for what learners and employers—the units' customers—need in the current moment. The best told us similar things—they were always in market research mode. They listen when learners ask if a program might be created soon; they read widely both the regular news and the trade press; they "get out of the building" (a lean startup mantra) to talk to experts to learn what is developing. They examined labor market data to identify trends. They survey potential learners to understand what works and what does not. Most importantly, they institutionalize employer input through advisory boards that meet regularly to review curricula, validate program relevance, and ensure graduates are job-ready.

This iterative approach produces programs genuinely responsive to labor market needs. Sometimes a master's degree is needed, but often it is not. Nondegree credentials (or no credentials) allow programs to emerge quickly, providing just-in-time training. Programs that stop serving learners or employers are closed rather than defended. The discipline comes not from accreditation bodies but from financial accountability—programs that do not attract learners do not survive.

Access by Design: Pricing and Modality for Working Learners

The best career sustainer units distinguish between programs designed to generate margin and programs serving a public mission. Executive education targeting corporate buyers can bear premium prices because companies have resources and the training produces measurable ROI. But programs designed to reach working adults who need help but lack employer support require different economics.

Mission-driven pricing means cost recovery or mission subsidy, not margin maximization. Georgia Tech offers an online master's in data science for about $10,000. Harvard Extension offers the same degree for about four times that cost. Northwestern's School of Professional Studies tops them all at more than $60,000—a price that will serve the campus, but far fewer learners.

Modality matters as much as price. Career sustainers have been at the forefront of education modality innovation for more than a century, bringing face-to-face instruction to adult learners off campus: in libraries, downtown office buildings, and hotel conference centers. They were also early adopters of new delivery methods, pioneering education through the mail (correspondence courses), radio, TV, and the internet. Asynchronous online instruction—allowing learners to complete coursework on their own schedules—is the most powerful access tool for working adults with caregiving responsibilities, irregular shifts, and limited commuting options. The best units use face-to-face where content and quality demand it, but also invest in online delivery not as a cost-cutting measure but as an access strategy, designing courses for people whose lives do not fit campus schedules.

The Quality Test: Four Hurdles Programs Must Clear

To protect both learners and institutional reputation, effective career sustainers apply a quality test to new program proposals with four components:

1. Demand validation: This is more rigorous than the lean startup mode of looking for ideas. This is testing ideas: Is there demonstrable learner and employer demand for this program now or in the near future? Career sustainers require evidence to pass this hurdle—labor market data (using sources like Lightcast and the Bureau of Labor Statistics), employer advisory board input, and learner surveys. Note that employer demand is key if the unit has a mission to serve the public––and not just generate revenue for the campus. Programs that cannot show clear demand do not launch.

2. Strategic fit: Career sustaining based at research universities typically furthers two different strategies, and unit leaders must be clear how a new program fits. Does it leverage the university's distinctive expertise in ways competitors cannot replicate? Research universities excel at "signature" programs built on faculty research and unique institutional assets—the kind of cutting-edge, just-in-time training only they can provide. For example, programs in areas such as Connected and Automated Vehicles (University of Michigan), ADMET in Drug Development (UC San Diego), and Electro-Optical/Infrared Systems Engineering (Georgia Tech) often draw directly on university labs, faculty expertise, and industry partnerships, making them difficult to find elsewhere.

At the same time, universities can leverage their status as “trusted providers” for training that is widely available but uneven in quality. Data analytics, project management, and cybersecurity certificates are offered by many providers, but programs offered under a research university’s brand carry a level of vetting and credibility that both learners and employers recognize.

3. Instructor and advisory bench: Can the program attract instructors with current industry expertise and advisory board members who will keep content aligned with practice?

Faculty credentials matter less than practitioner knowledge for many programs. In contrast to career launching, where PhDs are the unquestioned requirement for quality education for foundational skills, career sustaining is often enhanced by the real-world work experience of expert practitioners. The ability to draw on working professionals depends on employer relationships built over decades, and the power of the university as a hub that attracts talent.

4. Brand integrity: Will this program enhance or damage the university's reputation? Quality controls protect the institution. The era of programs outsourced to third-party providers (“online program managers” or OPMs) is receding but has not disappeared.

Putting a university’s name on a program run by an OPM risks losing control over content and learner experience. The best career sustainers keep design and delivery in-house, ensuring that credentials bearing the university's name represent university quality.

Programs failing any of these hurdles should not exist. Career sustainers with institutional confidence close underperforming programs rather than defend them—a discipline that protects both learners and institutional credibility.

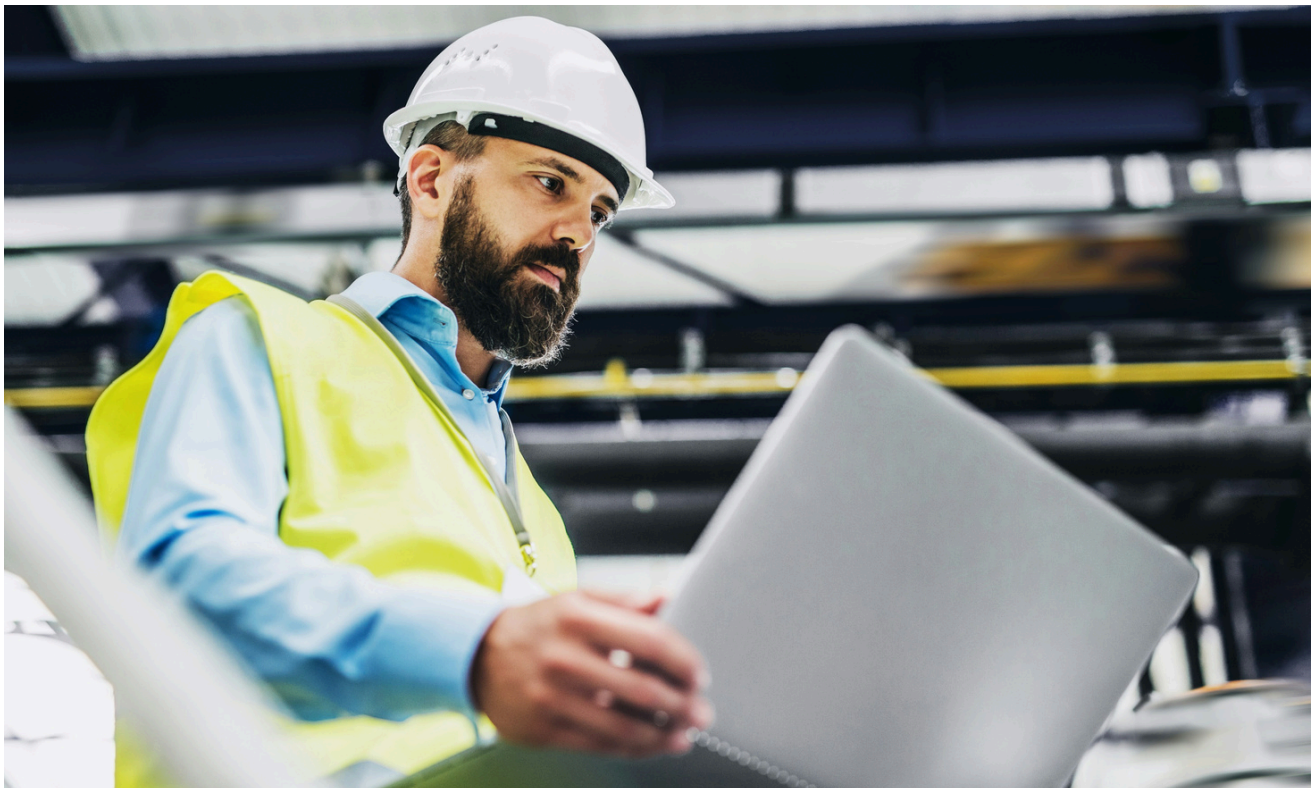
Getting It Right: Career Sustainers As Mission-Driven Service Units

At their best, career sustainers operate under different incentives than for-profit firms. They are mission-driven and recognize the necessity of protecting the public trust associated with the university's name.

A UC San Diego-Qualcomm partnership illustrates what mission-driven career sustaining looks like in practice for a signature play. Qualcomm needed to train a workforce in its proprietary CDMA technology—technology so new and localized in the early 1990s that no standard curriculum could address it—just as U.S. cellular subscriptions were surging from under 10 million to over 30 million in just a few years. To scale up quickly, Qualcomm turned not to a corporate training vendor but to UC San Diego's University Extension. Together, they built highly specialized certificate programs in telecommunications and semiconductor engineering, with Qualcomm scientists and engineers serving as instructors and contributing their own facilities and computing infrastructure. What began with 46 learners in 1995 expanded to over 1,800 by 2012—enough to help build a Fortune 500 company generating nearly $40 billion in annual revenue. The partnership continues to this day. Scale, in other words, did not drive quality; mission did. UCSD Extension pursued this partnership because it aligned with the university's public mission to serve the regional innovation economy, not because it promised the highest return.

Georgia Tech offers a different but equally instructive example of mission-driven career sustaining—one that illustrates the "trusted provider" play, and also puts to rest a common fear among university leaders. In 2014, Georgia Tech's College of Computing partnered with A&T and Udacity to launch an online master's degree in computer science priced at just $6,750, driven by an explicit commitment to "teach computing to the world." The program continues today. Nearly 90 percent of applicants to the online program are already employed, and their average age is 34—a profile sharply distinct from the in-person master's program, where fewer than half of applicants are working and the average age is 24. Rather than cannibalizing the campus program, the online degree expanded access to an entirely different population that the residential program had never served. One analysis of the program concluded that the higher education market

had been "failing to meet demand" for exactly this kind of offering. Georgia Tech's career sustainers did not crowd out their career launcher counterpart; they extended the university's reach and reputation into a market no campus program was serving.



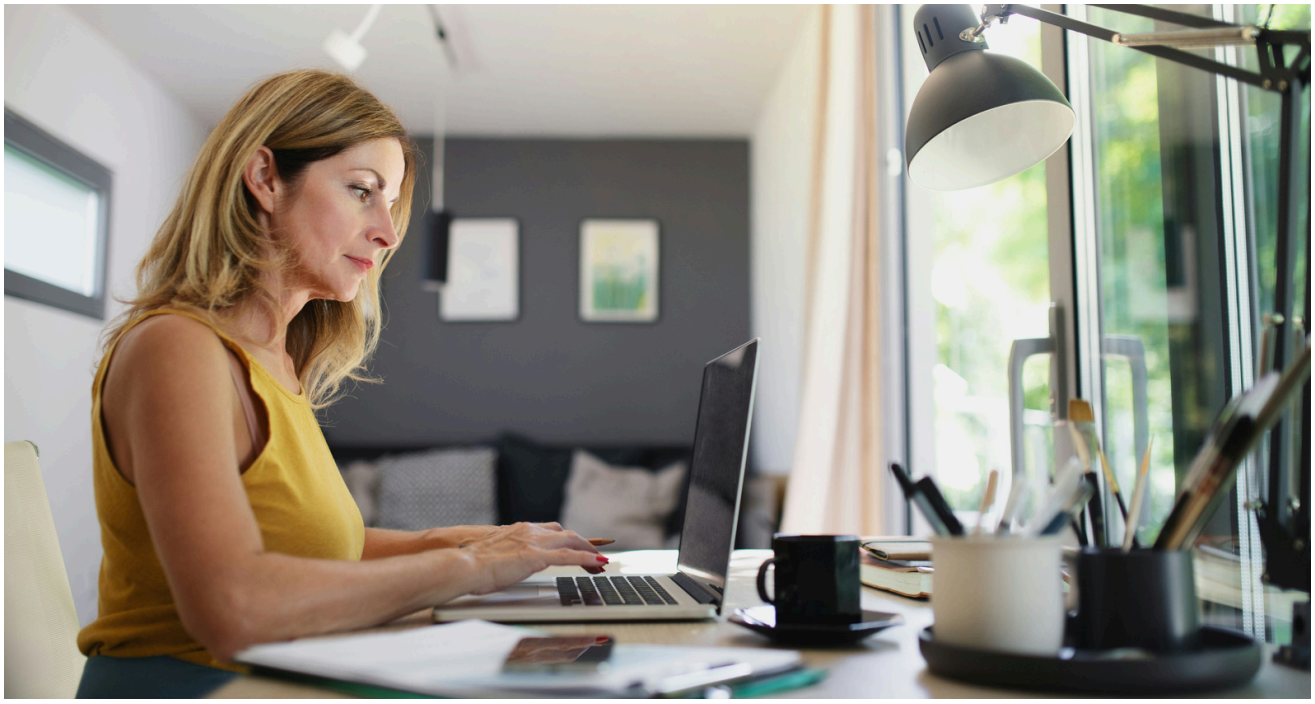
Getting It Wrong: Career Sustainers as Profit Centers

When research universities treat career sustaining as a mechanism for generating surplus revenue rather than a public mission, learners literally pay the price. In the 2010s, many prestigious universities began contracting with OPMs to generate quick and easy revenue. Caltech, one of the nation's most elite science and engineering institutions, offers a cautionary tale about what happens when a prestigious brand is leased to a for-profit vendor with minimal institutional oversight. Beginning in 2020, Caltech offered a cybersecurity bootcamp that bore its name and carried its reputation—but the program was conceived, staffed, and administered almost entirely by an OPM, Simplilearn. Students enrolled believing their courses were developed and taught by Caltech-affiliated faculty, but Caltech played no role in course delivery. Caltech received roughly 25 percent of tuition revenue while, as the ensuing lawsuit argued, students did not get what they paid for. One student, battling cancer and recently laid off, took out $14,000 in private

private loans after seeing an ad promising careers earning $80,000—only to discover that an instructor's primary credential was having graduated from the same bootcamp. A class-action lawsuit followed, and in 2025 Caltech settled, with Caltech and Simplilearn together refunding $2.4 million to 263 students and agreeing to new transparency and instructor-vetting requirements—before Caltech announced it would end the partnership altogether. The episode is a textbook example of what happens when universities seek margins without a quality test to protect the brand.

Columbia University's story is different in mechanism but similar in consequence. Facing financial pressure from an ambitious and costly campus expansion in Manhattan, Columbia in the 2010s turned to its professional and graduate divisions to generate revenue—leveraging the prestige of its brand in ways that bypassed the quality checks of mission-driven career sustainers. The result was a cluster of master's degree programs that were, for too many, roads to nowhere: learners enrolled, took on significant debt, and graduated into credential markets that had no use for what they had earned.

A Wall Street Journal investigation found that Columbia stood out nationally, with two programs where graduates' debt exceeded their earnings by a factor of four to six—Drama and Film, respectively. The culprit was not simply academic hubris; it was the absence of any serious demand validation. Mission-driven career sustainers with a quality test ask whether a credential will actually advance a learner's career before building the program. Columbia, under pressure to generate margins, appears to have asked only whether the Columbia name would fill seats—and it did, until the consequences became undeniable.



Why Career Sustainers Go Unseen

If career sustainers do such vital work, why do so few people know about them?

A big part of the answer has to do with prestige. University leaders often treat career sustainers as peripheral to the higher status "core" missions of research universities, which are understood to be basic research and career launching for young people. University ranking schemes reward institutions for selectivity and extravagant rates of per-pupil spending, pulling administrator attention to the costliest and most expensive and exclusionary programs on campus. Status-hungry students and their families reinforce the process through their willingness to swallow large fees in exchange for the prestige that so often accompanies exclusion. By contrast, academic units that operate as career sustainers work beyond the gaze of national rankings, high-gloss marketing materials, and campus tours that direct public attention to the high-profile programs. Administrators tend to understand them as nice to have, but barely relevant for chasing prestige.

This marginalization has consequences. Even with supportive leadership, career sustainers are expected to cover their own costs, while accredited degree programs receive state appropriations, federal financial aid, and endowment support that career sustainer units do not. Career sustainers almost invariably operate in separate buildings, use different staffing models, and remain largely invisible to those whose work supports the career launching in undergraduate and graduate programs. And regardless of where they are housed on campus, career sustainers operate on different timelines and serve different populations.

The low visibility can create fragility. Because career sustaining is rarely named as a core mission of research universities, it receives no protection when budgets tighten. Tragically, university leaders committed to serving young people in higher-status career launching programs sometimes turn to career sustainers as cash cows. When this happens, the quality test—if there was one—is jettisoned. Campus incentives then push toward margin-seeking prices and wealthier learners, or those who are willing to take on debt to enroll, and with little regard for program outcomes if learner demand is strong. The result is often outsourcing to

OPMs, jobless students burdened by debt, sometimes lawsuits and alarming news headlines, and a tarnished university brand.

Universities that continue to treat career sustainers as peripheral to their main business are making a choice: to narrow their stakeholder base, to lose public legitimacy, and to abandon a generation of workers who trusted that their degrees would be worth something in the labor market for more than a few years.

Comparing the Alternatives

Despite their proven effectiveness addressing the nation's most pressing human capital problems, career sustainers have been outside the limelight of policy conversations in recent years. Yet, career sustainers have substantial benefits that the more visible alternatives lack.

Updating legacy accredited career-launching programs has been employers' and policymakers' default response to skills gaps in the labor market for decades. Advocates for change today call for making legacy, career-launching programs more vocationally oriented, more integrated with workplaces through internships, and perhaps shorter in duration.

While such changes surely have their place in many schools and contexts, they will be inappropriate or simply unworkable in many institutions. Changes to career launching programs will often continue to require passage through faculty committees, college reviews, university approvals, and accreditation requirements. Some will argue that these processes protect quality; others will counter that they obstruct innovation. However, on many campuses, by the time a new program or major clears all required hurdles and its first cohort graduates a year later, technological change and employer needs have already shifted several times.

Even if universities could redesign their career launching programs overnight, there would still be tradeoffs. Foundational skills such as critical thinking, communication, and problem-solving are what liberal education provides and what many employers say they value most. Faculty and administrators may prevail in their arguments that accredited programs set graduates up for success over a lifetime because the skills they provide are portable and compound over time. By contrast, technical skills have short half-lives. Trying to turn undergraduate education into job-specific, "vocational" training may sacrifice long-

term adaptability for short-term alignment that becomes obsolete within years. Research universities can avoid such tradeoffs by leveraging a dual speed model: slow and steady for career launchers; quick and nimble for career sustainers.

Community colleges are often held up as the ideal model for mid-career reskilling. And surely community colleges can and must play a central role in enabling the nation for the transformation in virtually all workplaces underway nationwide. At their best they are nimble, employer-responsive, and affordable. Yet many, if not most, community colleges are specifically designed for pre-baccalaureate learners. Their missions are not typically oriented to advanced training for those who already possess college and postgraduate degrees.

Because they are primarily teaching institutions, most community colleges do not have faculty conducting research at the knowledge frontier. They lack labs where new technologies are developed. Unlike research universities, their employer networks and regional reputations have not been built through generations of research collaboration. For example, many community colleges are able to teach introductory data analytics; most would be hard-pressed to offer coursework in CDMA engineering for telecommunications, phased array antenna engineering for defense contractors, GPU-accelerated computing for cloud infrastructure, the latest methods for measuring methane emissions from oil and gas supply chains —programs that UC San Diego, Georgia Tech, University of Washington, and University of Texas provide because they have research expertise and industry partnerships built over decades.

Community colleges serve a myriad of essential roles in workforce development and regional civic life. The nation must continue to invest in their flourishing. But career sustainers at research universities are ideally suited for some of the work necessary to support a national human capital system geared toward the innovation economy. Any adequate vision of regional and national talent development will include the quick and nimble side of the dual-speed research university.

Bootcamps proliferated with promises of fast, affordable pathways to tech jobs. Some delivered, and many did not. The model struggled with a fundamental problem: low barriers to entry led to inconsistent quality, making it difficult to build employer trust at scale.

Bootcamps lack institutional infrastructure that makes training reliably valuable. Their problem may be their lack of enduring employer relationships—

something research universities often already have through decades of collaboration.

Bootcamps also face a credential problem. A three-month certificate from a for-profit company rarely carries the weight of one issued by a research university with a long, established record. For employers and prospective students, distinguishing high-quality bootcamps from diploma mills is often difficult. Research universities, by contrast, have developed credibility over generations, and this trust extends to nondegree credentials when their providers manage quality and reputation with care.

For-profit learning companies operate at scale by design—and that design shapes everything. Corporate training providers like General Assembly, Accenture LearnVantage, and a growing field of entrants compete to deliver standardized, portable skill packages to enterprise clients. Corporations are already spending $100 billion annually on training, and much of it is flowing to these providers. Their business model rewards reach and repeatability, not depth or regional specificity. Curricula must work the same way from coast to coast. Because of this scale and efficiency at delivering commodified training, they lack the capability that career sustainers at research universities can offer: contextualized, advanced training embedded in local employer ecosystems and tied to the frontier problems of particular regional economies.

Let us be clear here: we see a positive and very important place for learning businesses in the evolving ecology of talent development in this country. Private enterprise brings capital, ambition, and expertise inimitable within the walls of universities. But commodity scale is not the same as career sustaining. The regionally embedded, trust-mediated, employer-connected work that research universities can do remains largely outside the corporate training model. We believe that career-sustaining units of research universities offer important exemplars for this conversation. Indeed we see promise in thoughtfully designed joint ventures between universities, employers, and mission-aligned edtech companies in developing new kinds of work-based learning opportunities to meet targeted workforce needs—if incentives and priorities are carefully specified. In any case, preparing the national workforce for prosperity in the next decade will require an all-hands approach.

The Market Opportunity

Research universities face a choice: pursue a shrinking market or embrace a market thirty times larger. The market math is stark: Roughly 1.9 million of 3 million high school graduates enroll in higher education each year, while about 56 million college graduates were employed in the United States, with almost 72 million total holding degrees. The pool of traditional-age students peaked in 2025 and is projected to decline through 2041—a 13 percent drop driven by lower birth rates, a phenomenon widely known as the "demographic cliff." Universities organizing themselves around eighteen-year-olds are organizing around scarcity.

The market for career sustaining education is not hypothetical. Nearly half of all employers offer tuition reimbursement for continuing education. National Science Foundation data show that roughly 55 percent of STEM workers—arguably those most exposed to technological disruption—pursue skills-related training each year, and this rate does not drop below 50 percent until thirty years after degree completion.

Universities that ignore this market are making four simultaneous mistakes. First, they are choosing the smaller customer base while competitors capture the larger one. Second, they are abandoning a revenue stream at precisely the moment when demographic trends threaten traditional enrollment. Third, they are failing the public mission that justifies their tax exemptions, state appropriations, and federal research funding. Fourth, they are missing a chance to build their public support through increased stakeholders.

The demographic cliff means survival depends on diversification—and the most natural diversification for research universities is to serve the graduates they have already trained. These are learners who understand university culture, trust the quality controls, and need both the trusted, widely available training research universities provide and the advanced, research-informed programs only they can offer. The demand for career sustaining will only increase as AI disrupts jobs and entire occupations. Call it the demographic avalanche: millions of college-educated workers who will need ongoing career sustaining over the entire arc of their working lives.

The question is not whether this market exists. The question is whether research universities will claim it before providers beyond university campuses carve it up permanently for themselves.

A Blueprint for Action

Career sustaining education is not a new idea. Extension programs, continuing education divisions, and professional development units have existed at American research universities for well over a century. What is new is the urgency—and the opportunity for universities to take advantage of changed circumstances. The scale of employment disruption driven by AI and other technological transformations, combined with the demographic reality of longer working lives, has created a need for career sustaining at a scale and speed that other institutional arrangements cannot meet.

Closing the gap requires action from university leaders, policymakers, employers, and philanthropies. It encourages those parties to cooperate in fresh ways and at large scale. We offer the proven model of university-based career sustaining as a place to start, with recommendations for specific groups below.

University Presidents, Provosts, and Boards of Trustees

1. Name career sustaining as a core mission: University leaders might adopt a three-core mission statement—research, career launching, and career sustaining—and align incentive structures accordingly. Repeating and celebrating this three-core statement will signal that career sustaining is valued, protecting programs from being eliminated when budgets tighten or plundered for revenue generation. Career sustainers should report directly to senior leadership with goals tied to regional or national employer needs and public-interest outcomes.

2. Price for access, not revenue: Price nondegree credentials for cost-recovery, not margin-seeking. Universities should be transparent about tuition and use scale—not mark-ups—to support program development and quality. If leaders cannot explain in two sentences who is excluded or exploited by their pricing strategies and why that is acceptable, they are not acting in the spirit of public mission—no matter how large the revenue stream.

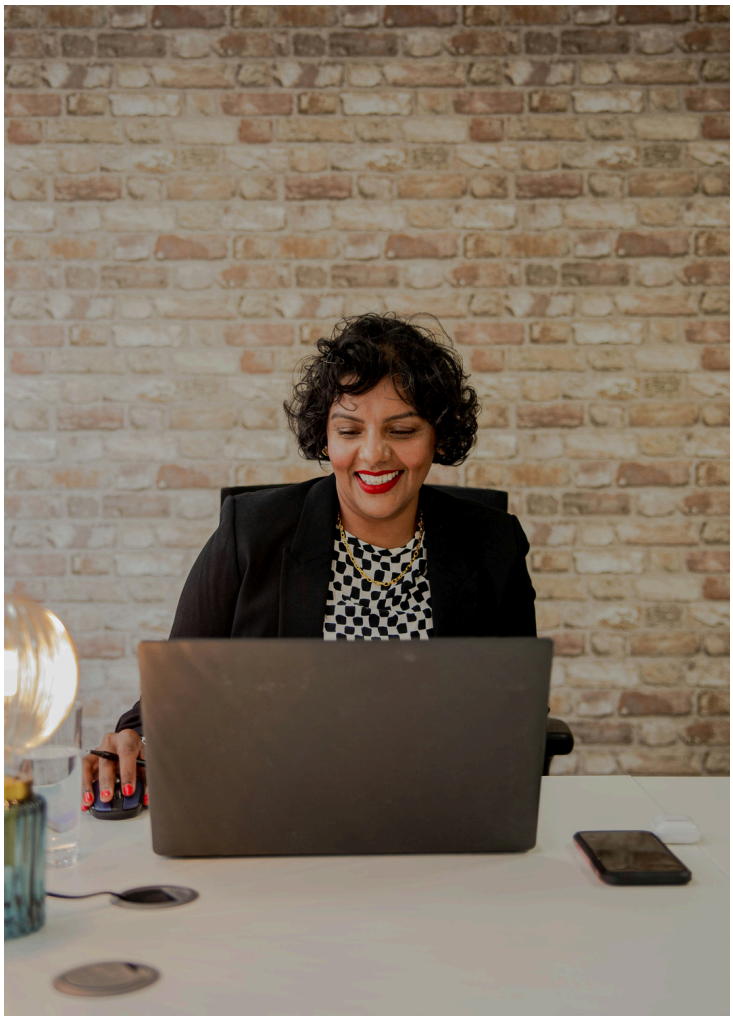
3. Institutionalize employer networks: Build advisory boards representing strong economic sectors in the relevant region or field. These boards should meet regularly with real authority to shape curriculum, validate program relevance, and connect programs to hiring pipelines. The primary mechanism keeping career sustaining effective is employer involvement in design, instructor selection, and program review.

Employers and Philanthropies

1. Buy learning for workers—and buy time for it: Even though career sustaining units do not track tuition reimbursement systematically, employer-funded participants make up a large share of enrollments. Employers investing in their workers are investing in their own bottom lines. The very best employers offer company time for skill updating, not just tuition dollars. Larger employers anchoring ecosystems of small suppliers can also underwrite seats for those suppliers.

2. Co-design programs, don't just purchase them: Companies that engage seriously with university career sustaining units—serving on advisory boards, providing instructors from their workforce, validating curriculum against real needs—get programs that actually work for their hiring pipelines. Passive consumers get generic content. Active partners get training tailored to their sectors. As one career sustainer told us, employers serving on advisory boards are "repeat customers"—the ultimate validation of program quality.

3. Make your support visible: Public narratives often highlight gaps between universities and employers, yet many employers in our research were deeply public-spirited partners. Their work shouldn't remain invisible. When "high-road" employers and universities keep their collaborations quiet, higher education looks disconnected, reinforcing public distrust. If these partnerships matter, they should be celebrated—openly and often.

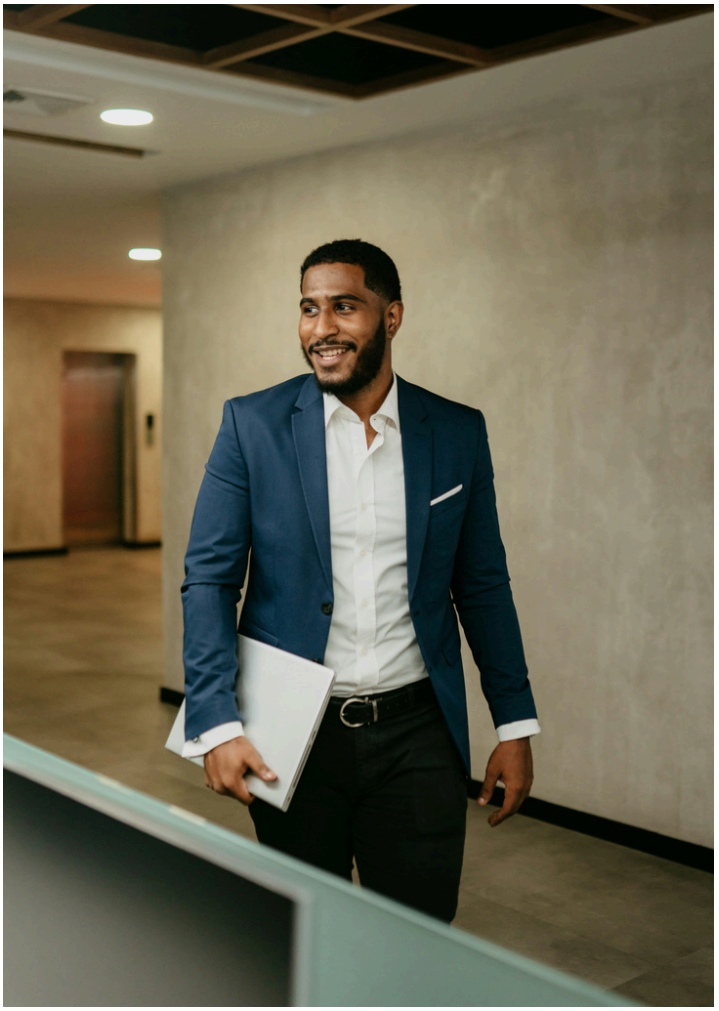


Federal and State Policymakers

1. Expand Pell Grants to cover high-quality nondegree credentials: Congress has created Workforce Pell, allowing short-term workforce programs to qualify for federal aid beginning in 2026. But eligibility rules must not sideline high-quality noncredit programs offered by research universities. Pell should reliably cover rigorous, employer-aligned noncredit certificates—not just credit-bearing pathways—so working adults and college graduates can access rapid upskilling without pursuing another degree.

2. Fund mission-subsidized career sustaining at research universities: State higher education appropriations should include dedicated support for access-oriented learning designed for working adults, recognizing that the public interest in a skilled workforce extends well beyond 18-25 year olds. Regional workforce development boards should treat research university career-sustaining units as essential partners with distinct learner populations, not as competitors to community colleges.

3. Create regulatory space for dual-speed universities: Career sustaining programs are neither traditional academic programs nor vocational schools. They operate at the boundary and should be regulated accordingly—with quality standards focused on outcomes rather than inputs, and approval processes permitting the agility that labor markets require. Accreditation bodies should recognize that nondegree credentials serve different purposes than degrees and need different timelines.



Conclusion: Research Universities for the 21st Century

Critics are right that something is broken about research universities, but many are misguided in their diagnosis. The problem is not that research universities teach the wrong things. It is that they have made service to a sliver of the life course their primary mission: undergraduate and graduate programs targeted to teenagers and young adults. Adhering to the career launching education mission that has defined American higher education in the twentieth century is like steering by the rearview mirror.

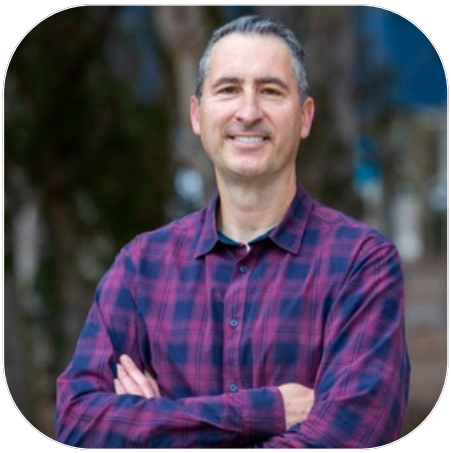
The best practices we identified among career sustainers at research universities offer a solution that works. Career sustainers reach learners and serve employers in ways other providers struggle to match. They demonstrate that universities need not choose between academic rigor and labor market responsiveness, between access and quality, between mission and sustainability. The dual-speed university model makes all of this possible at once.

These units do not lack capability. They lack recognition. They operate in the shadows of institutions that treat them as peripheral units—or worse, as revenue generators rather than core to the mission. Career sustainers prove daily that research universities can provide just-in-time training to early-, mid-, and late-career college grads at scale, yet remain invisible to policymakers who make workforce development decisions and are not widely recognized by the workers who could benefit from them most.

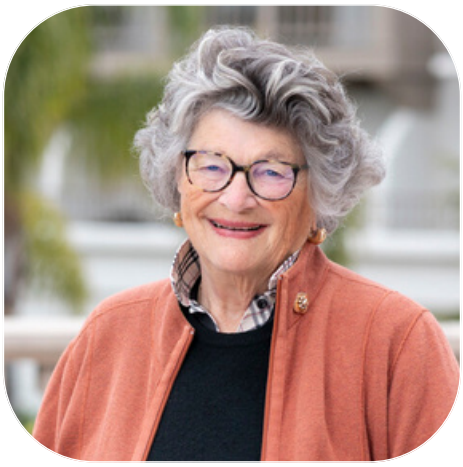
The opportunity to fully leverage these remarkable civic assets will not last indefinitely. Demographic trends are forcing universities to make choices now about what they will become and whom they will serve. Corporate training budgets are being captured by competitors who lack universities' assets but recognize the market's scale. Workers are losing faith that the institutions they once trusted have any interest in helping them beyond graduation day.

Research universities that name career sustaining as core to mission, invest in the units already doing this work, and hold themselves accountable for job outcomes will restore their social contract and secure their future. Those that continue treating it as peripheral will face a reckoning they are unprepared to manage. The capacity exists. The need is urgent. The only question is whether research universities will act while they can.

About the Authors



John D. Skrentny is Professor of Sociology at UC San Diego. He has written extensively on opportunities in education and employment as well as policies at the intersection of science, innovation, and immigration. His most recent book is Wasted Education: How We Fail Our Graduates in Science, Technology, Engineering, and Math, published by the University of Chicago Press. His articles have appeared in journals including Science, Yale Law Journal, and Sociological Theory. He is currently completing, with Mary L. Walshok, a book on how research universities can sustain the careers of college graduates across the life course. His research has been supported by the National Science Foundation, the Sloan Foundation, and the Guggenheim Foundation, among others, and his popular writing has appeared in outlets including the New York Times and the Wall Street Journal.



Mary Walshok is former Associate Vice Chancellor for Public Programs and Dean of University Extension at UC San Diego. She is the author or co-author of numerous works on the role of research universities in regional economies, including Knowledge Without Boundaries: What America's Research Universities Can Do for the Economy, the Workplace, and the Community, and Invention and Reinvention: The Evolution of San Diego's Innovation Economy. She has also served on a range of regional and national commissions and foundation boards focused on social and economic development, including the California Council for the Humanities, the San Diego Community Foundation, and The Conrad Prebys Foundation.

Connect with Learning Society

www.learningsociety.io

LEARNING SOCIETY