

SCALING SUCCESS: HIGHER EDUCATION RESPONDING TO 21ST CENTURY WORKFORCE NEEDS

KEY TAKEAWAYS

- Public colleges and universities are innovating to address concerns about the relevance of higher education through expanding experiential learning opportunities, providing new formats for working learners, and helping workers re-skill.
- Public colleges and universities welcome and broker partnerships among the private, government and education sectors.

Policymakers and the public are understandably concerned about the challenges shifting demographics and changing technology present to economic security and the vibrancy of the labor force. They're worried universities are not accessible to mid-career workers who need to upskill. And they're concerned that the college students who do earn degrees aren't entering the workforce with the skills and practical experience necessary to succeed right out of school.

Public colleges and universities are [innovating to address these concerns](#). They're working to increase the share of college-educated workers, expand experiential learning opportunities, provide new learning formats for working learners, and help workers re-skill as technology and shifting market demands render their skills less valuable.

These challenges are increasingly urgent. Talent is the primary driver of economic vibrancy, both regionally and nationally. A robust pool of talent improves productivity and competitiveness, sparks innovation and entrepreneurship, and creates economic resiliency amid rapid technological change. A World Economic Forum survey confirms the vital role of talent in shaping economic success, finding that 74 percent of companies name talent availability as the primary factor determining location for new investments.¹

WHY DEGREES STILL MATTER

Many of these companies seek a broad base of college-educated workers. Despite the growing skepticism about the value of a degree, the economic rewards for earning a college degree have multiplied over the past several decades. In 2018, college graduates enjoyed an unemployment rate that is half that of workers whose highest degree is a high school diploma. The earnings premium for a college diploma has also grown, from 20 percent higher than high school graduates in 1980 to 80 percent higher today. Colleges and universities are working to ensure a greater number of workers capture the gains of a post-secondary education.

¹ World Economic Forum, "The Future of Jobs Report 2018", 2018, p. 17. http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf

74%

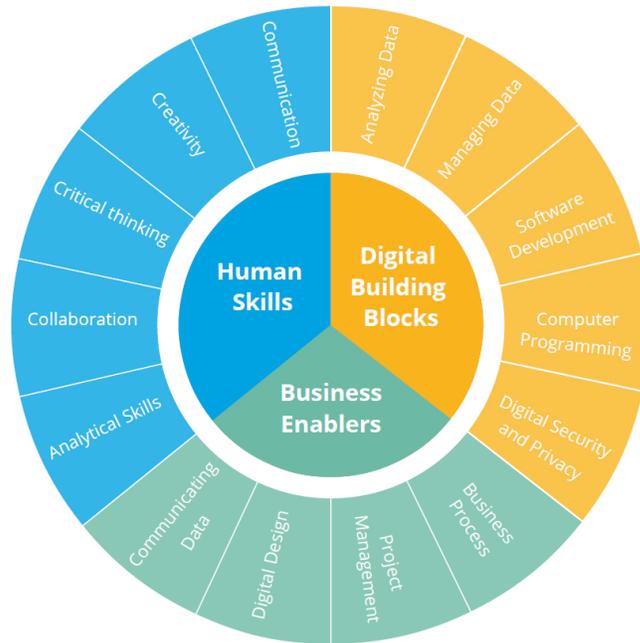
of companies
name talent
availability as
the primary
factor
determining
location for new
investments.

- World Economic Forum



ADAPTING TO CHANGING STUDENT & WORKFORCE NEEDS

They're adapting to meeting the needs of the growing number of non-traditional students. More than 42 percent of full-time college students and over 80 percent of part-time students hold jobs as they study. About one-third of these working learners are 30 or older, and roughly 20 percent have children. These working learners have a different set of needs and institutions are transforming to create an environment that better facilitates their success.



SOURCE: Markow, Will and Hughes, Debbie. The New Foundational Skills of the Digital Economy, Burning Glass Technologies/Business Higher Education Forum. http://www.bhef.com/sites/default/files/BHEF_2018_New_Foundational_Skills.pdf/

Universities are also working to improve the education they provide to all students. A recent Burning Glass Technologies Business-Higher Education Forum study identified a set of “New Foundational Skills” that employers seek across industries.² They found these key skills cluster into three primary groups: **human skills** applying social, creative, and critical intelligence (sometimes called “soft skills”); **digital building block skills**, including analyzing and managing data, programming and software development, as well as digital security and privacy; and **business-enabling skills**, including communication of data, digital design, project management, and business processes. Colleges and universities are using multidisciplinary degrees, skills certificates, and work-and-learn experiences to offer students in any degree program the opportunity to combine traditional liberal arts skills with these “New Foundational Skills.” This

² Markow, Will and Hughes, Debbie. The New Foundational Skills of the Digital Economy, Burning Glass Technologies/Business Higher Education Forum. http://www.bhef.com/sites/default/files/BHEF_2018_New_Foundational_Skills.pdf/

approach will improve the marketability of their degrees, their value to employers, as well as their ability to reinvent themselves as the economy changes.

With the increasing velocity of change, helping workers adapt to shifting labor market demands is more important than ever. The World Economic Forum 2018 Future of Jobs reports suggest that 54 percent of workers will require “reskilling” or “up-skilling” over the next five years.³ The U.S. Bureau of Labor Statistics predicts that 1.37 million U.S. workers will be displaced fully out of their roles in the next decade, requiring wholesale reskilling,⁴ while Deloitte argues that 47 percent of today’s jobs might be gone in the next decade.⁵ Deloitte also found that the skills shortages over the next decade could cost the U.S. economy some \$2.5 trillion in lost output.

Colleges and universities see these challenges and are taking a multifaceted approach to tackling them. They’re redesigning their curriculum, format, scheduling, and advising to ensure their programs are relevant to today’s labor market, accessible to a broader set of workers, and more hands-on.

CROSS-SECTOR COLLABORATION

Yet universities can’t meet workforce needs on their own. Colleges and universities often act as connectors in the educational ecosystem. They broker partnerships among high schools, community colleges, and employers to ensure students are aware of and reach the educational options most relevant to their goals, even if those options are at another institution.

There’s a lot more to do in this space. Universities are partnering with the private sector to: expand work-based learning opportunities that prepare students to hit the ground running; equip students with the skills they need to continue learning as technology changes and the job market makes new demands on them; offer multiple entry points for workers as their needs for higher education change throughout their careers; and provide credit for skills workers already have. Universities are also beginning to partner with credentialing organizations to provide a third-party stamp of approval that demonstrates that graduates possess those skills most in demand by employers.

³ World Economic Forum, “The Future of Jobs Report 2018”, 2018, p. 13
http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf

⁴ World Economic Forum, “Towards a Reskilling Revolution Industry-Led Action for the Future of Work”, 2019, http://www3.weforum.org/docs/WEF_Towards_a_Reskilling_Revolution.pdf

⁵ Deloitte, “2018 Deloitte and The Manufacturing Institute skills gap and future of work study”, 2018, <https://documents.deloitte.com/insights/2018DeloitteSkillsGapFoWManufacturing>

1.37
MILLION

workers will be displaced
fully out of their roles
in the next decade,
requiring wholesale
reskilling.

Other organizations have a key role to play too. Educational stakeholders—K-12, community colleges, employers, state and local workforce boards—must continue to partner to ensure we are serving student and employer needs as those needs evolve. And we must help students understand their options, choose those that best fit their goals and constraints, and realize the significant benefits of higher education throughout their careers.

EXAMPLES OF UNIVERSITY INNOVATION IN ACTION

The University of Memphis is partnering with West Tennessee Healthcare to help adult learners make faster progress toward earning their degree. The initiative uses credit-by-exam, adaptive learning, and experimental learning to eliminate the need for adult learners to fulfill coursework that they have already mastered. They are scaling the partnership to engage additional employers in the region through APLU's [Collaborative Opportunity Grants](#) program.

The East Carolina University (ECU) College of Education is responding to the shortage of teachers in rural North Carolina by partnering with 43 school systems, 20 community colleges, and a local air force base. Using scholarship funding as well as strong institutional resource commitments to the region, ECU has recruited working learners, many of whom already worked in the school districts as teacher's assistants, to become teachers. Candidates complete the first two years of the educator preparation degree at a partner community college and then take distance education courses through ECU. Four full-time ECU employees are stationed at designated community colleges to provide support during the transition from the community college to the ECU distance education educator preparation programs. This "grow your own" strategy has resulted in 711 graduates who are teaching at 65 public school systems across North Carolina, with the overwhelming majority serving in eastern North Carolina.

Clemson University's Center for Workforce Development is addressing the need for new systems for training and retraining workers as technology evolves. With funding from the National Science Foundation, Clemson developed a research and educational resource center providing support for technical education in two-year colleges through digital learning tools, resources for preschool through graduate education STEM engagement, and research on the effectiveness of digital learning in these contexts.

Montana State University's Gallatin College is working with industry partners to understand their current and future workforce needs and provide the training required to meet them. The state of Montana is

Public colleges and universities are working to increase the share of college-educated workers, expand experiential learning opportunities, provide new learning formats for working learners, and help workers re-skill as technology and shifting market demands render their skills less valuable.

the fourth largest in the nation in terms of geography, yet its population only recently reached one million people. In sparsely populated regions, providing access to affordable and relevant college degrees provides a path out of poverty and helps them make meaningful contributions to the local economies. That has driven the college's 120 percent growth over a six-year period. To date, nearly 500 students have earned one- and two-year certificates for programs such as IT, health care, aviation, Computer Numerically Controlled (CNC) machining, bookkeeping, business management, design drafting, interior design, photonics technicians, medical assistant, welding and more. These programs provide rewarding careers for workers with a range of different skill levels, as well as opportunities to refine their skills and acquire new ones as the need arises.

The University of Washington Tacoma has launched multiple initiatives to meet workforce needs and spur student success. Tacoma, Washington boasts a booming health care industry, but it still lacks qualified workers to meet community needs. The sector employs more than 15 percent of the population and is projected to increase annually over the next five years. To alleviate a skills shortage, a group of engaged community organizations, including UW Tacoma, teamed up in spring 2015 to begin to work towards a solution. They created a cohort of high school students receiving training that prepares them to pursue a career in health care, seeding the next generation of nurses and doctors. To help improve student success at UW Tacoma, the university also launched an opportunity academy providing students with professional development and financial wellness opportunities through additional workshops, networking activities, and information sessions. The academy also works to increase employer outreach and give students more internship opportunities.

Portland State University has worked with APLU to develop reTHINK PSU, a campus-wide effort to deliver an education that serves more students with better outcomes, while containing costs through curricular innovation, community engagement and effective use of technology. One example is the university's flexible degree program. Initiated in 2014, this program offered greater access to undergraduate and graduate offerings by creating online pathways for adult learners. These PSU students are typically adult learners who combine their studies with family obligations or a job. The program has created more than 20 new degree completion pathways, graduate degrees, and certificates as well as more than new 130 courses across 130 faculty.

The University System of Maryland is leading a multi-campus effort to work with the private sector and bring the unique institutional resources in the system to address Maryland's cybersecurity workforce needs. The University of Maryland, College Park, University of Maryland Baltimore County, University of Maryland University College, Bowie State University, and Towson University each have a unique role to play in the success of the initiative. Through the initiative, the number of students completing cybersecurity programs has increased dramatically, and the effort has provided opportunities for full and part-time students, working learners, veterans, active duty service members, women, and members of other underrepresented groups to join the cybersecurity workforce. The University of System of Maryland's community college partners have also played a key role in the initiative.

George Mason University developed a Digital Technologies credential to ensure students in general fields of studies, like the liberal arts, received the analytical skills and competencies workers need to compete in today's economy, creating a broader talent pipeline for employers across the region. The credential is based on a list of 41 skills area businesses are commonly seeking related to general fluency in digital technology. The credential is a recognition that students have taken a short sequence of courses covering knowledge and skills in high demand. The students in the program receive opportunities for job shadowing and mentoring, priority for internships and guaranteed résumé review for open positions with participating businesses.

Washington State University Extension has partnered with leaders from state agencies, community colleges, K-12, Washington STEM, and local stakeholders to help broker partnerships and increase rural engagement in workforce development. As part of a National Governors Association Policy Academy in 2017, WSU Extension led participation of regional sites in the Washington Governor's Summit on Career Connected Learning. Using Pathways to Prosperity, a successful distributed conference model developed at WSU Extension, Governor Inslee and other keynote presenters were live-streamed to 26 sites. This expanded participation in the Summit from the 346 who attended the conference at Microsoft headquarters to approximately 1,200 people, adding over 850 participants, many at rural sites across the state. In 2018, WSU Extension held a follow-up Pathways to Prosperity Career Connected Learning conference resulting in over 540 people at locations in 21 rural, small communities (as small as 350 population). Both events leveraged the information shared via webcast to participate in facilitated work sessions to identify local actions to increase rural work-based learning opportunities. This conference model has helped expand workforce development information access and led to success in securing Career Connected Washington grants to work on local career connected learning projects in rural Washington.