



SUSTAINING CAPITALISM

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Postsecondary Pathways for the Workforce of Tomorrow

Postsecondary education in the US—all formal learning experiences beyond high school, including two- and four-year degree programs and occupational and credential programs—is experiencing a momentous transformation in response to changing conditions and the demands of students, employers, and the economy. Yet public trust in higher education has reached a historic low, and for many in traditional degree programs, rising student debt undermines the return on investment many students expect from their college degree.¹ New thinking and broader pathways are necessary to meet the demands of tomorrow's workforce and society.

This Solutions Brief explores the current state of higher education and factors that are leading to this shift away from the traditional model. It considers the modern purpose of postsecondary education and details emerging practices that forge expanded design of and access to career pathways for all. The Brief also outlines recommended strategies to foster a postsecondary ecosystem to meet the needs of the future economy.

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The landscape of higher education is changing. The high cost of a college degree, in addition to many students' dissatisfaction with the quality of education they receive and employers' interest in hiring qualified employees, is driving an expansion of the postsecondary education ecosystem to provide more learning and training alternatives.

- College enrollment has declined significantly in recent years, partly attributable to a drop in the national birth rate and accelerated by COVID-19 disruptions. At the same time, researchers estimate that by 2031, 72% of jobs will require some form of postsecondary education or training, which may or may not include a traditional bachelor's degree.²
- Only half of business leaders believe that recent college graduates are prepared for the workforce.³
- A growing number of employers are embracing nondegree and skills-based credentials. In June 2024, only about one-third of job openings required bachelor's degrees, which calls into question the value and return on investment of a traditional college degree. In a 2024 international study, 81% of employers reported using a skills-based hiring approach for recruitment.⁴ Still, less than 1 in 700 jobs were actually filled by candidates without degrees.⁵
- In just one decade, between 2012-13 and 2022-23, the cost of a four-year degree increased by 25.6% (without factoring in inflation).⁶
- As of Q1 2024, collective student loan debt totaled \$1.75 trillion, and researchers estimate that \$100 billion will be disbursed for new loans to cover the 2024-25 academic year.⁷
- The price of tuition has outpaced the value of a Pell Grant, which now only covers 26% of the cost of college attendance, compared to 75% in 1975. As a result, more than 70% of Pell Grant recipients also have student loans.⁸
- College enrollment has declined by 9.8% since 2010, coinciding with the rise in tuition.⁹
- One study found that, prior to COVID-19 stimulus funding, 56% of schools were financially unstable.¹⁰ Sixty-one colleges have closed or merged since March 2020, affecting more than 45,000 students.¹¹
- While some traditional colleges and universities are facing decline and instability, nondegree credential programs are on the rise, led by businesses and alternative learning providers.

Recommendations

The future economy, with increasing focus on the role of artificial intelligence (AI) technology, demands a postsecondary education system that delivers reliable learning experiences and outcomes for students and employers. Policymakers and key stakeholders must address affordability, accessibility, and relevance while also accounting for diversity in learning preferences, lifestyles, and backgrounds.

1 Preserve the value of postsecondary learning

- To sustain the return on investment of higher education, postsecondary education should be more affordable and reliably lead to economic mobility.

- Schools must increase transparency around the net price of degree programs and expected outcomes upon completion.
- Accountability must be a priority to protect students as programs continue to close and open during the historic shift in the postsecondary market.

2 Evolve with student and workforce needs

- Learning institutions should partner with business leaders and industry groups to expand postsecondary options that align with industry needs and trends.
- Policymakers and stakeholders should ensure postsecondary options are accessible to all, easy to navigate, and relevant for students and employers.

3 Start career preparation early

- Expand equitable access to career and postsecondary on-ramps from high school.
- Integrate career exposure and advising early throughout K-12 education.

Purpose Revisited

Higher education is facing a historic reckoning on multiple fronts. Confidence in the sector has waned significantly in recent years. More than half of Americans question the value of a college degree, according to a 2023 survey by the Wall Street Journal.¹² College enrollment has steadily declined over the past decade, and the decline accelerated during the pandemic, though small gains have occurred over the past two semesters (fall 2023 and spring 2024).¹³ College completion has stalled at just over 60%, and only 11% of students from low-income backgrounds graduate within six years, which underscores the complexities around equitable outcomes within the higher education ecosystem.¹⁴ In tandem with the rising costs of college, student loan debt has ballooned. As of Q1 2024, collective student loan debt totaled \$1.75 trillion—up nearly \$750 billion in 12 years—and researchers estimate that \$100 billion will be disbursed for new loans to cover the 2024-25 academic year.¹⁵ Although the US now boasts the highest percentage of college-educated adults in history, many observers are challenging the necessity of a college degree for success in the workforce.¹⁶

The purpose and role of higher education have also experienced shifts over time, from its origins of educating ministers and validating social status nearly four centuries ago to equipping an evolving workforce, initially in agriculture and mechanical arts, then expanding in scope and offerings, particularly in response to technological advances.¹⁷ Higher learning has also been praised for fostering personal development and helping individuals become well-rounded citizens, though the acceptance of this benefit as part of the overall purpose has been long debated.¹⁸ In general, over time, postsecondary education has transitioned from a sustainer of social status to an engine of social mobility. In today's knowledge economy, a broadened higher education landscape is crucial to uphold America's promise as a land of opportunity for all. Our well-being as a nation and our economic prosperity depend on it.

Postsecondary education is critical for the future workforce and the vitality of the country. In fact, researchers estimate that by 2031, 72% of jobs will require some form of

postsecondary education or training, which may or may not include a bachelor's degree.¹⁹ Additionally, demand for technology-based skills and training will be significant as the tech workforce is projected to grow at twice the rate of the overall US workforce over the next 10 years.²⁰ However, shortfalls in the existing function of tertiary education in the US, including affordability and completion challenges, could hamper the ability to meet the projected need and risk leaving certain populations behind. The concept of postsecondary education should be broadened, for both students and employers, to realize a postsecondary ecosystem that meets the economy's and society's demands for highly skilled workers and leaders while also ensuring equitable opportunities for all. Further, greater adoption of technology in postsecondary education, including through the use of online programs, will provide greater convenience to many students and offer new opportunities.

The Value Proposition

Several studies affirm the potential value of a college education, specifically linking degree attainment to good jobs and wages, among other benefits.²¹ The lifetime earnings gap between college graduates and high school degree holders, which is now an estimated \$1.2 million, is frequently referenced to advocate for higher learning.²² However, outcomes can vary greatly across academic institution, type of degree, industry, location, gender, and race. In fact, one study found that for 30% of postsecondary institutions, most graduates earn less than those with only a high school degree.²³ Further complicating the value proposition of higher education is the rising cost of tuition. In just one decade, between 2012 and 2022, the cost of a four-year degree increased by 25.6% (without factoring in inflation).²⁴ Further, the price of tuition outpaced wage inflation between 2000 and 2020. To uphold the return on investment of postsecondary education, the value must be preserved by addressing affordability, transparency, and accountability.

The cost of college

Rising tuition costs have been attributed to several factors, including efforts to build more robust student support services and investments to modernize campus infrastructure and technology.²⁵ However, some colleges and universities have faced scrutiny and assertions that their spending priorities are more extravagant than practical, particularly around sports programs, new building construction, administrative hiring, and maintaining national rankings.²⁶ Others pin the rising costs on the fact that most expenditures in personal service industries such as higher education are related to labor costs and thus rise more rapidly than in other industries such as manufacturing.²⁷ Tuition hikes have also been linked to a significant reduction in state-level funding for higher education over the past two decades, although the infusion of federal relief funding during the pandemic propelled state funding beyond \$100 billion for the first time in 2022 and subsequent years.²⁸ At the same time, there is a debate over whether and by how much student loans should be forgiven.

There is also a great deal of obscurity around the true cost of college. While tuition prices are often noted on school websites, the net cost of college is complex and may vary per student. Less than 10% of first-time students are actually billed the full advertised price.²⁹

One study found that in 2023, the average college student enrolled at a private, nonprofit school received more than a 50% tuition discount rate through institutional aid, with greater discounts going to first-time, full-time students.³⁰ Unfortunately, the aid amount often holds steady even as tuition increases annually, which reduces affordability as students progress in their programs.

The strategy, known as a “high-tuition/high-aid or high-discount” model, is intended to entice students with the promise of a great deal. The approach was also intended to increase access for students from families with lower incomes, a population for whom net cost has actually decreased though it still remains unaffordable for most.³¹ However, the advertised high tuition rate has often served as a deterrent, especially for budget-conscious students who have no way of knowing the true cost until after being accepted.

Over the past few years, some institutions have employed tuition resets, in part to provide more comprehensible pricing information.³² Resets initially present as substantial cuts in tuition, but the move is actually a shift from advertising an exaggerated price to publicizing expected costs, which are more in line with the net price. Communicating net price to students is a best practice, especially in reward letters, but a US Government Accountability Office (GAO) study revealed that, as of 2022, half of colleges understate the net price, and 41% do not present the net price at all in student aid offers.³³ Transparency is a crucial factor in college affordability. Higher education leaders and policymakers must ensure students have clear and timely pricing information.

Net tuition revenue as a percentage of total revenue at public colleges has more than doubled since 1980 and now constitutes nearly half of all revenue.³⁴ For public institutions, the shift is partially a result of decreased state funding, which received significant cuts during the Great Recession and continued to lag until federal stimulus dollars reached states in response to the COVID-19 pandemic.³⁵ State leaders should prioritize higher education funding as a critical investment in their future workforce and shield spending from crisis cuts by shoring up rainy day funding set-asides for higher education, especially during positive budget cycles such as the current one, when most states are enjoying a budget surplus.³⁶ For the federal government, one proposal is to establish a \$5 billion annual matching grant to incentivize state investment and to buttress state higher education spending during recessions.³⁷ This proactive approach could reduce the need for emergency appropriations during economic downturns such as Congress provided during the pandemic and the Great Recession.

Congress should also preserve and expand existing federal higher education investments, particularly federal work study and Pell Grants, which offer critical support to students from families with low incomes. Unfortunately, the price of tuition has outpaced the value of a Pell Grant, which now only covers 26% of the cost of college attendance, compared to 75% in 1975.³⁸ As a result, more than 70% of Pell Grant recipients also have student loans.³⁹ More intentional upfront federal supports in higher education could potentially offset the billions of federal dollars expended to maintain federal student loans, including costs of loan origination, oversight functions, loan servicing, and loans in default.⁴⁰ Changing the law to permit private sector financial institutions to offer lower rates on student loans, while maintaining student protections, could also lower costs for students.

College pathways at a reduced cost

A number of programs have developed or expanded in recent years that deliver pathways to a college degree with a lower price. Dual enrollment programs, which are present in schools that serve 82% of high schoolers across the country, allow students to take college courses for credits in high school.⁴¹ Though program models and accessibility vary, dual enrollment programs have been linked to stronger outcomes in high school and college.⁴² Additionally, tuition-free college programs are available in 32 states; in most cases, these programs cover tuition costs not encompassed by scholarships and grants, though qualifications (such as income level) vary.⁴³ While these programs don't eliminate additional costs, such as books or housing, the tuition relief delivers substantial savings.

Increasingly, community colleges have articulation agreements with four-year institutions that enable students to seamlessly transfer into a bachelor's degree program after completing an established number of credits at the community college level. Thirty-one states have policies that mandate the guaranteed transfer of students from community colleges to four-year schools once certain benchmarks are met.⁴⁴ Community colleges are generally more affordable than bachelor's degree-granting institutions. Paired with automatic transfer programs, community colleges offer students a pathway to earn a bachelor's degree for nearly half the price. Leaders and policymakers should support and expand equitable access to these and other cost-saving options.

Financial literacy, planning, and debt

Students and their families would also benefit from college affordability planning tools. Far too few families understand how to identify and navigate the costs and tools to help pay for higher learning. Only half of high school graduates in 2021 completed the Free Application for Federal Student Aid (FAFSA), and higher-poverty schools were associated with lower submission rates.⁴⁵ Lack of awareness or misconceptions have been identified as the leading factors contributing to low FAFSA completion levels.⁴⁶

Due to a lack of applicants, nearly \$100 million in scholarships and \$2 billion in grants are unclaimed annually.⁴⁷ Furthermore, less than a quarter of people are using section 529 plans (or qualified tuition programs), one of the most advantageous investment vehicles to save for a child's college education.⁴⁸ Unfortunately, half of Americans don't know about the savings plan, though once informed, 61% say they would consider using it.⁴⁹ For families without the means to fully fund an account, matching contributions are offered in 16 states.⁵⁰

These resources represent a tremendous opportunity to proactively challenge the student debt crisis, but greater awareness and navigational support are needed. Leaders and policymakers should take measures to make college financial planning tools more accessible and disseminate information about potential resources. The K-12 education system should partner with financial institutions and community organizations to better communicate resources and help students, with their families, navigate financial supports.

Four-year programs drive debt for many students, and as such they have a strong interest in broader ways to reduce the debt burden; it will take new thinking and a variety of approaches to bend the increasing student debt curve. As businesses hire more directly from community colleges and nontraditional programs (with opportunities for students

to continue learning while at work, including through part-time and online programs), the total debt burden for those students will likely decrease. Students in programs that require advanced degrees, such as physicians, dentists, and attorneys, frequently accumulate more debt because of the length of those programs, and many start their careers with large amounts of debt that can restrict their career options. In other countries, by contrast, students begin professional school immediately after secondary school. Implementing these types of programs in the US would reduce debt for students and move graduates more quickly into their chosen field.

Transparency and accountability

Transparency and accountability are the linchpins that protect the return on investment of a postsecondary opportunity. This is particularly true as postsecondary options expand to serve a more diverse population of learners and new pathways are paved. Leaders and policymakers should take steps to ensure that institutions are transparent about costs and held accountable for expected outcomes.

Currently, postsecondary institutions that receive Title IV funding (which includes most federal student aid programs) are required by law to provide a net price calculator on the school's website. The US Department of Education also includes access to school net price calculators on the College Affordability and Transparency Center [website](#). The net price calculator can serve as a helpful tool for prospective students if data are accurate. However, as previously noted, the GAO found that many schools understate their net price. Additionally, the calculators vary by institution and some are overly cumbersome, requiring detailed personal and financial information. For some students, the tool is likely an invaluable resource for gaining a more accurate, personalized picture. For others, however, particularly those already struggling to navigate the college selection process, the questions have the potential to be off-putting. Students should have access to both net cost information and general tuition information while also maintaining the option to explore individual cost potential through the calculator. Since net cost can vary by family income and academic standing, schools could present average net cost figures for three to five student income and academic scenarios, similar to the way in-state and out-of-state tuition prices are presented.

On the federal level, various proposals to hold institutions accountable for delivering student outcomes and withhold federal funding from schools that do not have been considered in recent years. In 2023, the Department of Education finalized new regulations for a [gainful employment](#) rule that would require for-profit institutions and certificate programs to meet outcome-based metrics to remain eligible for federal student aid funding—a measure to ensure a more disciplined tracking of outcomes. Programs are required to ensure that at least half of graduates earn more than a typical high school graduate in their state and students earn enough after graduation to cover incurred debt (“debt-to-earnings ratio”). Additionally, the regulations established new reporting requirements for schools to outline expected program costs, nonfederal grant aid, and typical borrowing amounts.⁵¹

Policymakers and leaders should establish and maintain policies that protect students by holding schools accountable for student outcomes. At the same time, schools should not be penalized for enrolling a large population of students with high needs, including

those from low-income backgrounds. Instead, accountability measures should consider the school's demonstrated ability to foster economic mobility for students through tools such as the Economic Mobility Index, with consideration for geographic earnings and job market differences.⁵²

Leaders and policymakers should also be proactive about protecting students in the event of school closures. Sixty-one public or nonprofit colleges have closed or merged since March 2020, affecting more than 45,000 students; this number doesn't include students enrolled in for-profit schools, which represent 80% of closures between 2004 and 2020.⁵³ Closures are so frequent that some students are transferring from one shuttered college to another that eventually faces the same fate.⁵⁴ However, less than half of affected students transfer to new schools. Even then, most don't graduate.

School closures are expected to continue, especially given the impending "enrollment cliff" due to a drop in the US birth rate and expanded pathway options.⁵⁵ One study found that, prior to COVID-19 stimulus funding, 56% of schools were financially unstable.⁵⁶ Closures are typically due to financial challenges or loss of accreditation, both of which usually bear warning signs such as a visible decline in services or probationary status from an accrediting agency.⁵⁷ Still, most students report an abrupt closing experience where they felt blindsided.⁵⁸

Leaders and policymakers must take steps to mitigate harm to students by educating them about warning signs and enforcing policies that ease transitions in the case of closures. Based on best practices, such policies should include student records retention; surety bonds (secured and maintained by for-profit and some nonprofit schools to reimburse students for losses in the event of a closure); tuition recovery funds (which are often managed by the state and funded by schools through student fees), and teach-outs (an arrangement set into motion in the event of a school closing that allows students to continue studies at another institution).⁵⁹ Unfortunately, a significant number of states don't require such protections, placing students at risk.⁶⁰ Leaders and policymakers should establish protective policies and implement practices that minimize negative impacts on students when schools close, particularly in the current climate when the higher education market is consolidating and transforming at extraordinary speed.

The Shift to Skills—in All Pathways

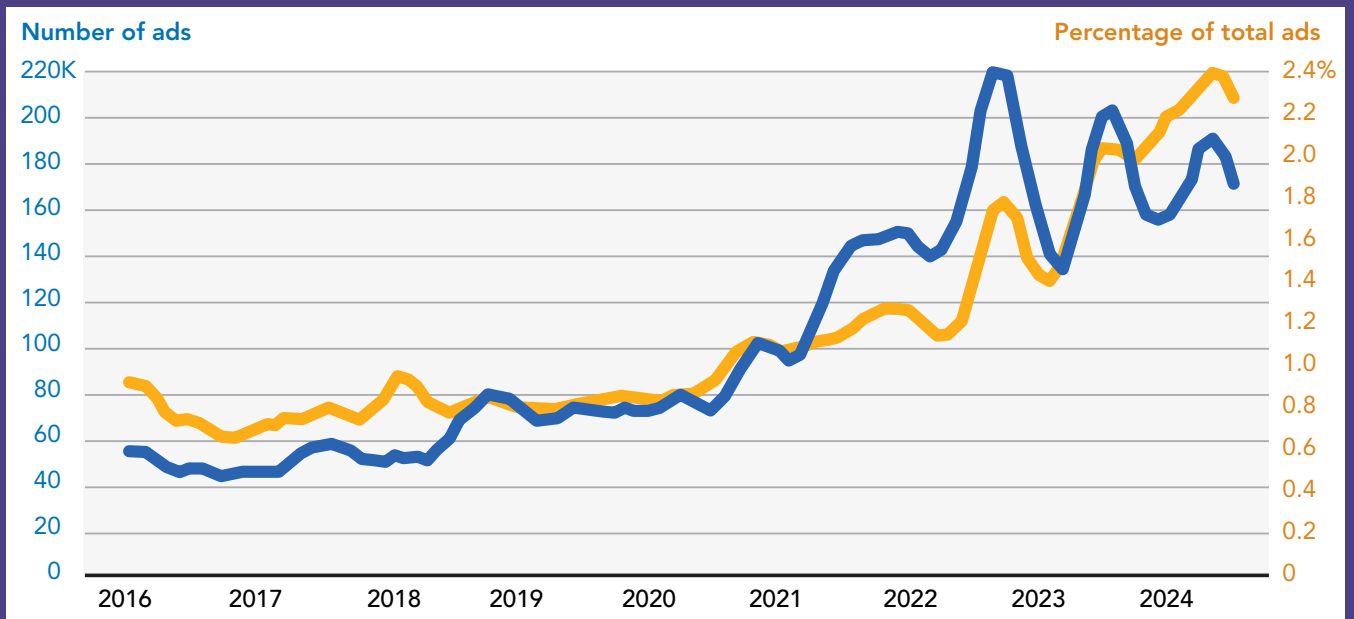
In addition to cost as a deterrent, students and employers have voiced the disconnect between higher education and the workforce for quite some time.⁶¹ Almost half of college-educated workers believe that college did not prepare them for their current jobs.⁶² Similarly, 40% of business leaders believe that recent college graduates are unprepared for the workforce, and 10% of leaders are unsure.⁶³ This perspective has helped drive a shift toward skills-based hiring practices in recent years, in which employers prioritize skills over degrees when seeking new employees. As an essential corollary of this shift, as long as students have the necessary skills, employers should consider meeting their hiring needs from community colleges, trade schools, and other pathways. There should be no stigma attached to these alternative forms of postsecondary education.

In March 2024, 81% of employers reported using a skills-based hiring approach for recruitment.⁶⁴ Further, new research from the Economy, Strategy & Finance Center of The Conference Board demonstrates a large shift in bachelor's degree requirements for new job openings. Prior to the pandemic, around 45% of job postings required at least a bachelor's degree, while around 39-40% required at least a high school diploma or GED. After the pandemic, these trends flipped. In December 2020, more than 50% of postings required just a high school diploma or GED, while the percentage of postings that required at least a bachelor's dipped to below 35% in January 2021. The large difference in the share of job postings eventually equilibrated. In June 2024, 45% of postings required a high school diploma or GED and 37.5% required at least a bachelor's degree.⁶⁵

Similarly, employers are increasingly offering on-the-job training for new positions. As of June 2024, the number of online job postings that offer training or mention no experience needed has more than tripled since January 2016 (56,990 to 176,685), and the percentage of all online job postings with these mentions has more than doubled (0.94 to 2.27). These trends are expected to continue as long as companies continue to emphasize a skills-based hiring approach.

Figure 1

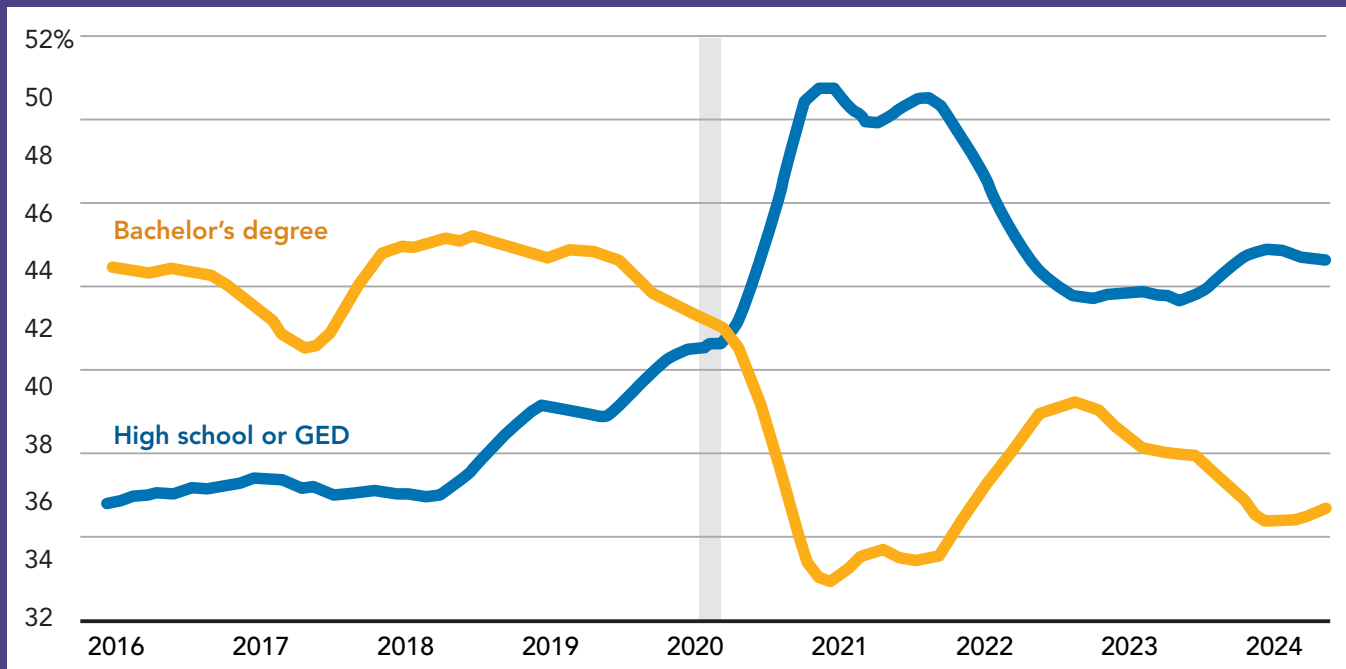
Online job postings mentioning "on the job training" or "apprenticeship"



Source: The Conference Board Help Wanted OnLine® (HWOL), 2024

Figure 2

Online job postings requiring at least a high school diploma vs. a bachelor's degree



Source: The Conference Board Help Wanted OnLine® (HWOL), 2024

Learning and earning based on skills

Unfortunately, traditional institutions of higher education have been slow to adapt. One study found that while 86% of faculty and staff desired skills-based learning models, only 22% of colleges and universities actually provided such offerings.⁶⁶ In a separate study, 81% of students expressed an expectation for higher education to deliver workplace skills and half believed alternative pathways could meet their goals.⁶⁷

In response, some business leaders and employers are taking initiative to advance higher learning based on skills. One CEO blames the talent shortage, particularly in tech, on the inability of the higher education sector to adapt to market needs, which inspired him to create an online university with a skills-based curriculum.⁶⁸ Another CEO launched a new school in partnership with a leading university in experiential learning to close the divide in Maine, where the tech sector employs more than 12,000 people but the higher education system had only produced 103 computer science graduates at the time.⁶⁹ The school partners with employers to engage students in six-month cooperative work experiences to help them apply learning directly on the job. In recent years, major tech employers, including Google, Microsoft, and Amazon, have created skills-based courses and credential programs to fill the gap and meet the upskilling needs of the incumbent workforce, which is important given expectations of a rapid and ongoing shift in required skills as AI adoption in the workplace grows.⁷⁰

Still, shifts in workplace needs and in public opinion of higher education do not represent the death of college, as some have suggested.⁷¹ While some employers have relaxed

hiring requirements, less than 1 in 700 jobs were actually filled using skills-based hiring in 2023.⁷² Moreover, credentials from skills-based learning have yet to fully translate into greater earning potential. A recent study found a potential income boost for associate degree holders who also possess credentials.⁷³ However, bachelor's degree holders, with or without credentials, continue to outearn high school graduates and associate degree holders. This signifies that, in general and at the moment, credentials are a supplement to rather than a replacement for degrees.

The ongoing gap in earnings potential between diploma and degree holders demonstrates that employers may not be able to fully assess skills during the hiring process without the marker of a degree. This is a clarion call for higher education to become more expansive and address the need for degree and credential earners to translate learning into skills in a way that employers can understand. Some schools have adopted the practice of skills-mapping to better articulate the transfer of learning into in-demand skills. Beyond the benefit to students, mapping can help schools identify gaps within their programs and update their curricula to better prepare students for the workplace.⁷⁴ The strategy can also demonstrate skills obtained in liberal arts programs, which often do not have clearly defined career trajectories.

Competency-based education is another emerging strategy that addresses student and employer interest in demonstrating job readiness. The approach focuses on student mastery of skills and competency, rather than seat time, and allows students to advance at their own pace. More than 600 institutions in the US offer such programs, which are considered translatable for employers with skills-based hiring practices.⁷⁵ One private nonprofit online university, a leader in competency-based education, also employs skills-mapping to demonstrate the alignment between its curriculum and in-demand workforce skills. The strategy is more favorable for many students, particularly adult learners, who report greater satisfaction with the programs and experience better postgraduation outcomes than the average student nationally.⁷⁶

Innovative colleges and universities are also transforming relationships with businesses and industry leaders from transactional to collaborative. Through industry advisory boards, companies from industries relevant to the school's offerings provide real-time input on the skills required to excel in specific careers.⁷⁷ The partnership also ensures that curricula evolve with trends and advances in the industry. Some schools have launched industry advisory boards to optimize the learning experience and ensure students graduate industry ready. One university, for example, has a [Graphic Information Technology Industry Advisory Board](#) that includes leaders from local and national graphic technology companies, as well as an [Engineering Industry Advisory Board](#) that assesses existing and proposed curricula, evaluates the industry readiness of program graduates, and delivers industry practices and trends to maximize program effectiveness.

Colleges have also partnered with the business community to develop customized workforce training programs to meet industry needs, for instance for spending authorized under the Infrastructure Investment and Jobs Act and CHIPS and Science Act. One state college supports upskilling needs for incumbent workers by partnering with employers to deliver customized courses to meet specific needs. The school has program offerings of various lengths including 10 weeks or a full semester and can deliver instruction at the company location or on campus during work or evening hours.

Common course subjects include managerial training, communications, accounting, and quantitative decision-making.⁷⁸

In Virginia, three community colleges partnered in the [Community College Workforce Cooperative](#) (CCWC) to serve as a workforce development engine for the region. Together with the Virginia Ship Repair Association, the CCWC delivers industry-relevant training through the association's [Marine Trade Training Program](#), a prehire program that delivers accelerated boot-camp style courses for the shipbuilding and ship repair industry. The program offers training in many other related trades and has a 90% hire rate for completers. The CCWC also partners with employers to support traditional work-based learning programs including apprenticeships; it also offers employers the option to customize training and education programs.

Intentional relationships with employers and industry leaders help colleges and universities deliver relevant instruction and learning opportunities for students and employees. Industry advisory boards, customized workforce training programs, apprenticeships, and short-term upskilling courses are effective strategies for helping schools remain pertinent and meet both student learning expectations and workforce demands. Higher education leaders should partner with the business community to expand postsecondary offerings that align with industry needs and trends.

Alternative and innovative learning environments

Another emerging approach to modernize higher education is the dual mission institution, which houses a range of learning programs in one school, including credentials, associate degrees, and bachelor's degrees. Such institutions offer streamlined pathways, which are particularly helpful for students in rural communities as they eliminate the need to transfer between institutions for higher pursuits.⁷⁹ The dual mission institution community includes an estimated 400 colleges and universities and is poised to grow, especially as the system that classifies higher education institutions—the [Carnegie Classification](#)—will be revamped in 2025 to modernize its metrics, including recognizing the value of dual mission programs.⁸⁰

Also, several community colleges have begun to offer bachelor's degrees.⁸¹ Community colleges have a history of being more accessible, flexible, and affordable than four-year schools. States and higher education leaders have pursued this expanded offering to meet workforce demands and increase access to four-year degrees. While 80% of students enrolled in community college express interest in obtaining a four-year degree, only 33% actually transfer to bachelor's degree granting institutions.⁸² Embedding bachelor's degree programs into community colleges allows associate degree earners to seamlessly transition while maintaining a familiar support system.

Leaders and policymakers should examine and update policies to foster flexibility in traditional models and innovation. For example, Utah recognizes dual mission colleges and has embedded supports for the unique approach into its higher education resources.⁸³ Additionally, community colleges are authorized to confer bachelor's degrees in 24 states and counting,⁸⁴ and such programs have grown by 32% since 2021.⁸⁵ Both approaches offer models of how leaders and policymakers can support accessibility and equity,

delivering postsecondary learning to more people and meeting the expectation that workers will require upskilling more frequently in the emerging economy.

Additionally, a growing number of institutions of higher education are creating and expanding programs to offer nondegree credentials including microcredentials, badging, and industry certifications. Microcredentials are records of learning achieved through a short program in a specific set of skills; for instance, microcredentials in the field of education include classroom management, family engagement, math practices, teacher leadership, and technology integration.⁸⁶ Badges are representations of learning achievements, often displayed on a digital platform, and can reflect skills, competencies, certifications, and credentials.⁸⁷

The expansion of nondegree offerings on college campuses as well as credential providers enriches the market to meet the demands of students and employers. Employers should consider how they can meet hiring needs through nontraditional pathways. At the same time, students need guidance on how to navigate options and discern the benefits of specific credentials. Due to the growing popularity of nondegree credentials, the offerings are vast: currently, more than 1 million credentials are offered in the US by over 50,000 providers.⁸⁸ This growth has given rise to efforts to organize and sustain the market and to help students and employers make sense of the myriad options. For example, the [Credential As You Go](#) initiative is working to systematize credentialing across the country. A national system would help with the portability of credentials, allowing earners to transfer credentials from one state to another.

Leaders should ensure the expansion of new, evidence-based modes of learning (such as skills-based, competency-based, and work-based) are accessible to all, easy to navigate, relevant for students and employers, and transferable into the workforce. Minnesota state leaders, recognizing that users must often visit multiple websites to gather information for career pathways, partnered with nonprofit Credential Engine to contribute to a registry that provides transparent information about credential opportunities.⁸⁹

In Texas, the Higher Education Coordinating Board has led the development of several resources to help with navigating the postsecondary landscape. The board places a high priority on helping students successfully navigate the myriad higher education options in the state with a focus on quality. The board says it operates from the philosophy and conviction that [“access and success without quality is mediocrity, and that quality without access and success is unacceptable.”](#)

A board-supported website hosts information to help students understand college options, with specific content for diverse users including recent high school graduates, adult learners, and the military. The site provides detailed information to help identify postsecondary programs and even includes encouragement and tips to guide the selection process, noting that many schools offer tuition discounts. Through the [Texas Consumer Resource for Education and Workforce Statistics \(CREWS\) website](#), students can compare data on postsecondary programs by school, program, or career interest

to learn more about graduation rates, student loan levels, and graduate wages for prospective schools. Texas CREWS includes programs with various degree levels, certificate programs, and occupational skills awards. The board also supports a virtual advising chatbot, ADVi, that offers guidance and answers student questions in real time.⁹⁰ These user-centered resources demystify postsecondary options and expand access to quality credentials for all.

Leaders should also pursue innovative outreach approaches to keep the public informed and help students navigate the growing web of postsecondary options while avoiding harmful and deceitful traps. Government agencies should work across silos to communicate postsecondary information through multiple agency programs, including social services, labor and business development programs, and faith-based partnership offices. Community anchor institutions, where social capital is often exchanged, should be leveraged to communicate information as well. As an example, [the White House Office of Faith-Based and Neighborhood Partnerships](#), which has partnership centers embedded into federal agencies, uses community organizations to expand public awareness and access to resources. The US Department of Veterans Affairs partners with faith-based and community organizations to establish welcome centers that connect the veteran community to information and services. The US Department of Health and Human Services partnered with community organizations to host maternal health events in 11 cities and connect pregnant women and new mothers to educational information and resources.⁹¹

Some community organizations also pursue local partnerships in trusted neighborhood social settings. The Maryland Center for Health Equity at the University of Maryland leads an initiative, [Health Advocates In-Reach and Research \(HAIR\)](#), that engages barber shops and beauty salons as “culturally relevant portals for health education and delivery of public health and medical services in the community.” Through these trusted neighborhood partners, the initiative delivers health services and educates the community on a range of health topics, including mental health, flu prevention, colorectal cancer, and navigating public health emergencies. Efforts such as these are models for how policymakers and leaders can engage community organizations and venues on how to navigate and finance postsecondary options, as well as how to avoid bad actors in the postsecondary space.

Early Career Preparation

In addition to strengthened and expanded effective postsecondary pathways to careers, students need earlier opportunities to explore career possibilities and access early pathways. Only one-quarter of high school graduates feel well prepared to make college or career decisions.⁹² Many students choose college as a default, hoping to find their way through the process.⁹³ While some do, it is a risky proposition considering that only 20% of students who have undeclared majors for over two years actually make it to graduation.⁹⁴ Even after degree completion, a significant number of graduates express indecision around career interest. About 75-85% of graduates switch majors before they leave school, and more than half of graduates would change their majors if they could do it over again.⁹⁵ Earlier access to career exploration and pathway opportunities, with support from school counselors or school advising, could help students feel more certain

and develop clearer goals; it could also improve successful transitions into the workforce (whether immediately after high school or following the completion of a postsecondary program).

Early access to postsecondary pathways

Connecting students to postsecondary pathways as early as high school can help them transition into the workforce or postsecondary learning with a purpose, saving time on discovery and money. Historically, career and technical education (CTE) was an avenue for career training and exposure in high school. Unfortunately, such programs disproportionately tracked students from families with low incomes into the blue-collar workforce while more advantaged students went to college to achieve higher-paying jobs.⁹⁶ As advocates challenged this two-track system, many CTE programs were dismantled. However, the CTE sector has experienced a revival in recent years. Modern programs now appeal to a broader group of students, including the college bound. Programs that follow best practices allow for multiple entry and exit points and build in opportunities for students to transition to the next level of education.⁹⁷ This is critical since 70% of the top 20 occupations at risk for labor shortages over the next decade typically do not require a bachelor's degree,⁹⁸ though a postsecondary credential may be needed. Inclusivity and the needs of the future workforce require students to be aware of and have access to all potential pathways.

New York City recently unveiled a career-centered high school model that reflects a modern CTE program. The [FutureReadyNYC](#) initiative aims to prepare students for careers in high-wage, high-demand sectors and currently targets occupations in IT, health care, education, and business. Student participants can earn early college credit and/or an industry credential while learning about financial literacy, taking career-connected classes, engaging in work-based learning opportunities such as paid internships, and receiving personalized career advising. New York City employers and local business leaders are critical partners, hosting work-based learning opportunities and advising school-based practitioners on pathway experiences.⁹⁹

Youth apprenticeship programs at the high school level are also growing in number and becoming more expansive to include careers that require a college degree. Youth apprenticeships combine academic instruction with hands-on, paid work experience to help students transition seamlessly from school to work. The [Urban Institute](#) sponsors apprenticeship programs to offer early career development and exposure to high school students. Some major employers also offer apprenticeships. The [UPS School to Work](#) program engages high school seniors in a work environment and provides students the opportunity to enroll in local community college courses paid for by the company. JPMorgan Chase's [Smart Start](#) program immerses high school students in the financial services environment during the school year and summer. Participants receive a full four-year scholarship to a partner college or university and support from a program manager to navigate career opportunities within the company. More than 300 program completers currently work at JPMorgan Chase.

Immersion programs bring high school students onto a college campus, often over the summer, to sample the college experience. Nonprofit College Track incorporates an immersion experience, [Semester Zero](#), into its college success program. Over the

summer, the program hosts rising high school juniors from around the country on the campus of Northern Arizona University for a weeklong immersive experience. During the program, students participate in workshops and courses facilitated by college faculty and experience other aspects of college life. The approach helps acclimate students into the college environment and validate their college aspirations.

Early pathway programs allow students to jump-start career preparation and training, which can boost motivation and confidence as they transition out of high school. Such programs also help level the playing field for students from low-income backgrounds. Policymakers and leaders should expand equitable access to career and postsecondary on-ramps that start early and continue through high school to support persistence and college completion.

Leaders should also engage parents at the high school level in support of career advising and pathway exposure. Students are often guided or influenced by family members when making postsecondary decisions. Parents should be incorporated into the process so that they also gain knowledge to help students make informed decisions.

Career exploration

As a precursor to early pathway opportunities, early career exploration would benefit students. In a recent study, middle and high school students reported low interest in many high-growth sector jobs, despite showing aptitude toward the skills required for the role.¹⁰⁰ Many students lacked awareness about what the job entailed, likely due to low exposure.

In several districts across the country, students begin to explore careers in kindergarten as part of a growing initiative that began in Cajon Valley, California—the [World of Work](#).¹⁰¹ In Cajon Valley, students are exposed to six careers per school year beginning in kindergarten. Students also meet professionals from various careers and industries to learn about real-world experiences. As they progress in grade level, students complete interests tests annually and learn about careers related to their interests. By high school, students have narrowed their focus on a particular career and enter into mentorships to gain further exposure. At this point, students also have the flexibility to reconsider career interests and revisit alternatives. The opportunity helps students graduate from high school with a clearer career interest and suitable pathway plan.

Leaders should integrate career exposure and advising early throughout the K-12 level. Students should have multiple opportunities to explore a variety of careers and interests, representing a range of earning levels. This is particularly critical for students from families with low incomes as a study found that graduates from low-income backgrounds often choose lower-earning majors.¹⁰² Exposure and preparation are key to ensuring that all students can first envision themselves in successful careers and then persist in pathways to good jobs.

Conclusion

Society needs broader and deeper options for higher education to reduce social and economic disparities and prepare students for the future workforce. Thankfully, the landscape of higher education is changing in response to student and societal demands. Despite disruptions and expansions in the higher education landscape, the value of a college degree will not disappear in the near future. Instead, the market will continue to make room for additional credentials as both a supplement and complement to traditional degrees. As postsecondary options become more expansive, the workforce must adapt systems to value and recognize the new learning options. While innovation should be embraced in an evolving postsecondary ecosystem, inclusivity, flexibility for the learner, and equity must remain key priorities. To realize a postsecondary education system that serves all who embark on a journey of higher learning and training, the system must have affordable options, remain industry relevant, and support early pathway access starting in high school or earlier grades. Sustaining a postsecondary education that works for all, particularly in the knowledge economy and continued digitization of the manufacturing sector (known as the Fourth Industrial Revolution), can better foster prosperity and facilitate our nation's promise of economic mobility.

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