

Paper No. 2

Preparing a 21st Century Workforce

BY BENNETT G. BOGGS

A rapidly changing global economy and public perceptions of universities as unresponsive to a changing marketplace have created a genuine challenge for American postsecondary education. Addressing this challenge adequately requires public colleges and universities to re-examine their organizational focus, structure and responsiveness. This is no easy task. But as the old saying goes: With challenge comes opportunity. As part of “A Legislator’s Toolkit to the New World of Higher Education” series, this brief provides an overview of the changing job market and how higher education can best respond to prepare today’s students to be tomorrow’s workers. Examples of state and institutional initiatives and legislative enactments are offered to show how states are responding.

The Challenges

A CHANGING WORK ENVIRONMENT

As noted in [A Legislator’s Toolkit Brief No. 1](#), the workforce is undergoing disruptive changes involving technology, artificial intelligence and the gig economy characterized by a growth in freelance workers. These changes, occurring both rapidly and simultaneously, affect both “blue collar” and “white collar” professions and require a new perspective on the nature of work and how to prepare workers for the future.



About this series

With the support of the Laura and John Arnold Foundation, this is the second of eight briefs published by NCSL as “A Legislator’s Toolkit to the New World of Higher Education.” The series seeks to inform legislators about the current challenges to public postsecondary education so that they can form cohesive, strategic approaches to building effective and efficient postsecondary systems responsive to future statewide economic and community needs. In addition, a database housed on the NCSL website will identify other states’ approaches to governance, funding and affordability, allowing policymakers to share information, exchange ideas and adopt the best practices that meet their state’s particular needs.



Coupled with this is an understanding that young workers will need to face these changes while also experiencing unique aspects of their own work environment. Jeffrey Selingo [writes](#) in The Washington Post that current college graduates are entering one of the healthiest job markets in recent decades. The class of 2018 is facing an unemployment rate of less than 4 percent, compared with their counterparts in 2010, who faced a 9.5 percent unemployment rate. The significance? The year one graduates from college has an effect on his or her earnings during the early, formative years of employment. Those who begin during a downturn start with lower wages, and it might take a decade to catch up to those fortunate enough to begin in better economic times. However, due to the 2008 Great Recession, 43 percent of the 2010 graduates remain [underemployed](#). In fact, 66 percent of graduates underemployed at graduation remain so five years later, and of those, 74 percent remain underemployed [10 years later](#). Such long-term underemployment leads to chronically reduced income capacity, and therefore less financial independence and fewer personal and professional choices and opportunities. The unique 2008 work environment created enduring consequences and raises questions of lifelong worker advancement and well-being.

A [survey](#) sponsored by the Association of American Colleges & Universities (AAC&U) found that, while executives and hiring managers believe educational institutions are adequately teaching entry-level job skills, they do not believe students have the competencies to be promoted. Beyond a student's academic major, business leaders value workers with critical thinking and effective communication skills coupled with natural curiosity. Institutions are not fostering a commitment to lifelong learning—a skill fundamental to a rapidly changing economic environment.

CHANGING PERCEPTIONS OF AMERICAN HIGHER EDUCATION

The lack of confidence in higher education is not confined to hiring managers alone. Polling by the [Pew Research Center](#) over the past two years found uncertainty about the value of higher education broadly. Constituents cite concerns with campus culture and student debt, and anecdotes abound of underemployed college graduates working in coffee shops and living in their parents' homes. The emerging image is that higher education is unresponsive, or worse, unconcerned.

These frustrations are balanced—and accentuated—by the view that higher education is still seen as the single best gateway to opportunity. Elected leaders want to see their public institutions be more responsive to changing workforce and economic needs. They want them to provide programs designed to help their graduates' employment prospects as well as aid state and regional economic development efforts.

For both elected and university leaders, this brings into conflict the traditional tensions of institutional missions and purposes: personal growth and enrichment versus pragmatic, professional training. This tension is not new. Historically, in times of economic change, the nation has responded. In the early stages of the Industrial Age, Congress passed the Morrill Act of 1862, which provided land to each state to establish public universities focused on advancing agriculture and industry. This was a revolutionary concept, drastically opening higher education for pragmatic professional learning at a time when it was generally reserved for the select few and focused only on a strictly limited liberal arts curricula.

Approaches That Work

The opportunity before public colleges and universities is to demonstrate a genuine responsiveness to the changing work environment and prepare students to thrive within it.

CREATE BETTER STUDENT LEARNING OPPORTUNITIES

Handshake, an online recruiting platform used by more than 500 colleges and 250,000 employers, reviewed more than 5 million job applications. It [found](#) that graduates are changing the types of employers they seek and wanting to apply skills in industries beyond their academic majors. In analyzing the study, Selingo [concludes](#) that—similar to the AAC&U [findings](#) among business leaders—students preparing for the workplace need to understand that:

- The ability to do a job matters more than a student’s area of major. Graduates are working in areas beyond their specific courses of study. What matters is their ability to successfully contribute to the job by applying a variety of skills.
- The traditional liberal arts major can be successful in the current job market. However, these students need to include “hard skill” courses such as technology, computer coding and data management in their experience. They also should be prepared to translate competencies in critical thinking and writing in ways employers can understand and value.
- Career service programs for all students need to start on the first day, and universities need to include “hands on” learning opportunities such as internships and undergraduate research projects. These activities allow students to develop demonstrable and translatable skills in addition to specific content knowledge.



Similarly, Northeastern University President Joseph Aoun [writes](#) that, in light of the recent STEM and technology debates in economic development and postsecondary education (and the tension between personal growth and learning versus pragmatic professional training), universities can forge a “middle ground.” Such a path would remain true to the perspective of learning for personal development while also preparing students for lifelong employability. Rather than trying to predict what jobs will be available to graduates, universities can instead focus on integrating technical literacies, such as coding and data management, with human literacies, such as creative thinking, writing and entrepreneurship. These, combined with experiential learning such as internships, lead to genuine and demonstrable learning.

DEMONSTRATE BETTER INSTITUTIONAL RESPONSIVENESS

In creating these genuine learning opportunities, colleges and universities also can demonstrate a responsiveness to changing workforce needs even within their own communities. Ken Trzaska, president of Seward County Community College in Kansas, [perceived](#) a distinct gap in what his college offered and what his surrounding community and region needed. Seeing the types of jobs available and the skills gap expanding among his graduates, he led an initiative for the college to rethink how it served its community. The college engaged regional business and industry partners on what they needed from their workers in the long term. Most importantly, the institution wanted to ensure the “college offerings were tailored to our students—not the other way around.” This led to the creation of “A-OK” (Accelerating Opportunity Kansas) courses and programs, such as welding and commercial truck driving, offered in venues targeting working adults. Such an effort demonstrates responsiveness, better comprehensive student learning and a willingness to transform higher education to meet workforce needs.

FORM INDUSTRY PARTNERSHIPS

Trzaska’s institution is not alone in seeking better connections to the surrounding community. Similar industry partnerships [exist](#) among different types of communities (i.e., urban, suburban, rural) and different types of institutions (i.e., community colleges, flagship and regional universities). All offer opportunities for better connections between institutions and communities, better institutional awareness of workforce needs, and therefore better student preparation.

Examples of these approaches include:

- In **South Dakota**, Lake Area Technical Institute [forged](#) partnerships with 400 state and regional industries to ensure that graduates have the immediate workplace skills needed. This effort resulted in a 99 percent graduate placement rate. The institution reports that the partnerships help both students and the institution: Academic programs and industry needs and standards are aligned and continually reviewed and strengthened.
- The **New Jersey** Institute of Technology and the city of Newark established a center to help both the college and the city enhance its technology infrastructure and connect with corporate sponsors such as IBM and Panasonic.
- In **North Carolina**, Duke University and the city of Durham developed an innovation lab in an abandoned cigarette factory. Microsoft invested in the effort, resulting in new research tools for the participating 350 students.

How Legislatures Can Help

With an awareness of changing state economies and workforce needs, state legislators interested in helping their public colleges and universities better prepare their graduates can focus on statewide workforce challenges and educational opportunities.

ALIGN POSTSECONDARY EDUCATION AND WORKFORCE INVESTMENTS WITH INDUSTRY NEEDS

Arkansas Senate Bill 441 (2017) creates a legislative task force to review technical and workforce education programs. The Legislative Task Force on Workforce Education Excellence is charged with finding ways to improve and better align Arkansas’s career-technical education and workforce development programs.

Indiana Senate Bill 198 (2017) offers a variety of strategies for aligning education and workforce systems. They include requiring the governor’s office to develop a comprehensive workforce development plan with assistance from the Department of Workforce Development, the Commission for Higher Education and the State Board of Education. The legislation also requires the State Board of Education and the Department of Workforce Development to work together to develop career-technical education programs.

In 2018, **Indiana** enacted **Senate Bill 50**, which establishes the College and Career Funding Review Committee, statewide requirements for apprenticeship programs and the Real World Career Readiness Program. These efforts are to help ensure clearer and better coordinated workforce preparation among colleges and their communities statewide.

ENGAGE INDUSTRY AND EMPLOYERS

Minnesota Senate Bill 1456 (2017) requires the commissioner of labor and industry to convene industry representatives to identify occupational competency standards for work-based learning programs in advanced manufacturing, health care, information technology and agriculture. The industry representatives are also charged with identifying, developing and implementing the work-based learning programs.

Tennessee Senate Bill 1231 (2017) limits employer liability to encourage more employers to participate in Tennessee’s Labor Education Alignment Program (LEAP). It also allows the Tennessee Board of Regents and the Tennessee Higher Education Commission to develop curricula for work-based learning courses in LEAP. LEAP aims to better coordinate key stakeholders at state and local levels to address workforce readiness. LEAP enables Tennessee students enrolled in Tennessee Colleges of Applied Technology (TCATs) and community colleges to participate in technical training developed with input from area employers. LEAP started in 2013 with the passage of HB 1276.

In **Utah**, the Legislature in 2018 enacted **House Bill 327**, which establishes a pilot project to help people in rural areas take advantage of job opportunities online. The law requires Utah State University to administer the pilot project through existing county extension offices.

Conclusion

With a rapidly changing global economy, higher education graduates need to be prepared for a lifetime of change. State legislatures can help their public institutions respond in a manner that strengthens their ability to address statewide economic and community needs—leading to stronger institutions, and stronger states, better aligned and prepared to meet 21st century demands.



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NCSL Contact:

Bennett Boggs

Program Principal

303-856-1516

Ben.Boggs@ncsl.org



NATIONAL CONFERENCE *of* STATE LEGISLATURES

William T. Pound, Executive Director

7700 East First Place, Denver, Colorado 80230, 303-364-7700 | 444 North Capitol Street, N.W., Suite 515, Washington, D.C. 20001, 202-624-5400

www.ncsl.org

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