

# Producing Quality Credentials

## ► Why data and analytics matter

Countless media reports point to the mismatch between workers' skills and employers' needs. Education and employment data bear out this fact. Using data from the National Survey of Student Engagement (NSSE) and other sources, an influential 2011 report found that a substantial percentage of recent college graduates lack core competencies critical to career success.<sup>1</sup>

In this environment, producing more college credentials is essential, but not as much as ensuring that degrees and certificates are of a high quality and provide graduates with the specific skills for high-wage jobs currently going unfilled. While completion and wage data describe the extent of the problem, they do not generate systemic solutions for producing valuable, high-wage credentials. Most state and postsecondary system leaders have the tools necessary to measure institutional achievement of state goals and to identify the soundest approaches and investments. These leaders simply have to take advantage of already-vetted and proven institutional models and strategies.

However, education and wage data often come in waves and torrents, threatening to inundate rather than aid policymakers. Fundamentally, data should contribute to our understanding of how states realize their education and workforce goals. The increased focus on career readiness provides a great opportunity for states and systems to explore models and strategies that leverage data and improve credential productivity and quality.

This issue of *The Progress of Education Reform* presents emerging research on the value of credentials and highlights ways that states can leverage data and accompanying strategies to strengthen the fit between the production of postsecondary credentials and workforce demand. In addition, this issue:

- Features research on student and workforce outcomes
- Explores how policymakers can use data to make state goals more actionable and attainable
- Highlights replicable institutional models and strategies that could increase degree production and quality.



### What's Inside

- Emerging research on the relationship between jobs and degrees
- Recent legislation that serves as exemplars for policy action
- Institutional platforms that provide immediate data feedback

20  
12  
OCTOBER  
Vol. 13, No. 5

THE PROGRESS OF  
Education Reform



Education Commission  
of the States

## Data and Research Highlights

### 1. Strong link between degree attainment and higher wages

- ▶ Low college completion rates have a far-reaching and negative effect on students, families, taxpayers, and the government. A more educated workforce provides higher median wages for residents and greater tax revenues for states and the federal government.<sup>2</sup>
- ▶ The wage gap between college and high school graduates has widened, with college degree holders earning, on average, almost twice as much as workers with just a high school diploma.<sup>3</sup>

### 2. Not all college credentials created equal

- ▶ Not all college credentials produce an earnings boost above that of a high school diploma.<sup>4</sup>
- ▶ Field of study matters. Degrees and certificates in health care, STEM, and business fields usually produce income premiums, compared to other credentials at similar levels.<sup>5</sup>
- ▶ Credential level matters, but some two-year degree and certificate holders earn more than working adults holding bachelor's degrees. Roughly 28% of workers with an associate degree earn more than their colleagues with bachelor's degrees.<sup>6</sup>
- ▶ Local and regional demand for certain skills can influence earnings.<sup>7</sup>

### 3. What's the cost of not pursuing postsecondary education?

- ▶ Of the 46.8 million jobs created by new openings and retirements by 2018, only 36% will be filled by working adults with no exposure to postsecondary education.<sup>8</sup>
- ▶ The unemployment rate for adults with no degree is twice that of those who hold a postsecondary credential.<sup>9</sup>

### 4. Workers with some college at significant disadvantage

- ▶ Over time, personal incomes for working adults with some college credit but no degree have decreased.<sup>10</sup>
- ▶ Conversely, completing a college credential significantly impacts earnings, especially for middle-aged workers.<sup>11</sup>

### 5. Degree and certificate program choice matters

- ▶ The length of a degree program and expected college costs are powerful drivers of whether students enroll in college, especially for low-to-middle academic achievers.<sup>12</sup>
- ▶ With a significant number of programs producing credentials in low-wage, low-demand areas, however, it is critical for states to use data to identify these programs.



## Data Point by Point

Each of the research statements on the previous page presents a policy opportunity or challenge. The research and economic data are clear on the state and individual returns from postsecondary education. What is less clear, however, is how these data can be leveraged by state leaders to identify which programs and approaches best achieve education and workforce goals. The table below takes those research statements and translates them so states can make data and accompanying strategies actionable.

Legislation is from 2012, unless otherwise noted.

<b>Making Data Actionable: A Policy Matrix</b>			
<b>Intended Outcome</b>	<b>Data &amp; Research</b>	<b>Policy</b>	<b>State or System Example</b>
Provide greater guarantees that credentials produce an earnings premium.	Some credentials do not provide a significant income boost.	Review programs of study. Increase transparency on which programs produce low-quality or low-demand credentials.	<b>West Virginia SB 436:</b> Directs institutions to use appropriations to expand student access to high-demand programs of study.
Increase access to and completion rates for high-demand programs of study.	Field of study matters and wage data bear this out.	Configure financial aid, student supports, and instruction to improve completion rates and decrease time-to-degree.	<b>California AB 2385 (2010):</b> Provides pilot grants for nursing programs to use technology, coordinated student services, and expanded financial aid assistance to improve degree completion.
Recognize workforce need when making investment and capacity decisions.	Local variations in credential demand are important.	Direct institutions to work with local businesses to determine which credentials are in demand.	<b>Colorado HB 1061:</b> Requires agencies to produce an annual report regarding workforce projections and degree needs.
Increase the number of adult “near-completers” who finish a degree or certificate.	Incomes for workers with some college but no degree are static.	Improve re-enrollment rates for adults by giving them a clear and articulated path toward program completion.	<b>Florida HB 5201:</b> Creates a program to recruit adults to finish programs in high-demand fields. Requires use of competency-based tools to reduce time-to-degree for adult near completers.
Increase enrollment and completion rates for low-income students and adults.	Program length and cost are critical enrollment drivers.	Create a pilot program to reward institutions that recruit and graduate low-income students and working adults for in-demand associate degree and certificate programs.	<b>Kansas HB 2435:</b> Establishes a grant of \$1000 per program term (maximum of two program terms) for eligible students enrolled in an in-demand associate degree or certificate program.

## Creating a Culture of Institutional Improvement

State policymakers and postsecondary system leaders can support institutional models that enhance program completion rates and degree quality. New approaches have integrated technology and data analytics to provide immediate feedback to instructors, students, and departments on how well degree and certificate programs are preparing graduates for viable careers. These strategies, if implemented across a state postsecondary system, have the potential to increase the number of students who receive high-quality credentials.

### Course and Program Level:

A new **Iowa law** directs the Board of Regents to develop a program for implementing *continuous improvement plans* for each undergraduate course. High-enrollment courses will receive first attention. The plan requires analysis of student assessment data and other course completion data.

Purdue University has implemented an *online-based, student-centered platform* called Course Signals.<sup>13</sup> Based on descriptive data added to the system and research-based predictive modeling, the program assigns students to a “risk group,” which corresponds to stoplights: green, yellow, and red. Missing classes, failing to turn in homework, and low exam scores can trigger intervention e-mails. On a course level, the data also provide information on the rigor of exams and how well skills are being acquired by students. According to Purdue’s data, the distribution of students receiving grades of A or B have improved by 28% in some courses.

Texas House Bill 3025 (2011) requires *student degree plans*, which state the course requirements that an undergraduate must complete to be awarded a degree or certificate. Students must file a degree plan with their institutions, and must provide notification to the institution when courses taken are inconsistent with the degree plan. Institutions may set up program advisement systems that enable counselors and faculty to approve course registration.

### Program Spotlight: Washington’s Student Achievement Initiative

Five years ago, the Washington State Board of Community and Technical Colleges launched the Student Achievement Initiative. The system created performance metrics based on evidence of which benchmarks promote student success. Each of the 34 system colleges collects data along these metrics. Systems supplement these data and reporting mechanisms with technical assistance resources. When the system office provides models and strategies for improving programs and student services, institutions can increase the career readiness of graduates. While the Washington example does incorporate financial incentives, institutional programs have become internally accountable to their institution and to their students.



## Institutional Level

State policymakers in several states, including California, Minnesota, and Texas, have directed postsecondary institutions to review student outcomes based on their program of study. While these state policies detail metrics for institutions to consider, the same data collection could be leveraged to identify programs of study that perform below the institutional median on performance metrics. For entrepreneurial institutional staff, demographic and performance data could be matched to conduct quasi-experimental analyses of programs to measure the relative impact of certain interventions and investments.

## State and System Level

Traditionally, state systems of higher education serve in an advisory and oversight role. Since these institutional models are implemented voluntarily, the system's role is slightly different. The state should ensure that workforce needs are met by the totality of postsecondary institutions; supporting local innovation and systematizing these approaches statewide is essential to increasing student access to high-demand, high-quality credentials. By supporting the wider use of proven approaches, states could achieve the improbable: a system where colleges and universities institutionalize effective models and hold themselves accountable—to students, citizens, and the state economy.

## Conclusion

Completion and wage data do not provide a solution; rather, they define a problem. While degree completion challenges are significant, most states are equipped with the student and program data necessary to drive improvement.

Policymakers, by leveraging existing models, can do much to bring about systemic change. Though seemingly simplistic, supporting local implementation of technology, data-informed models can improve credential quality and postsecondary-workforce alignment.



## ECS Resources

### Revving the Education Engine

This ECS publication created a policy framework for understanding the linkages between postsecondary education and the workforce. In particular, the brief introduces three strategies for improving workforce alignment—all of which appear in this Progress of Education Reform: assessing and validating in-demand skills, aligning data, and developing models to leverage these data.

[www.ecs.org/docs/RevvingEdEngine.pdf](http://www.ecs.org/docs/RevvingEdEngine.pdf)

### ECS State Policy Database for Economic and Workforce Development

Summaries and links to recently enacted legislation related to economic and workforce development.

<http://www.ecs.org/ecs/ecscat.nsf/WebTopicView?OpenView&count=-1&RestrictToCategory=Economic/Workforce+Development>

### Boosting College Completion Blogs

Boosting College Completion for a New Economy is an ECS initiative funded by the Bill & Melinda Gates Foundation. Two recent blogs relate to the use of workforce data and responding to workforce demand.

The most recent post discusses the use of employment and wage records. Education and wage data matches have the potential to change the policy conversation by indicating which state postsecondary investments might reap the highest return on state investment.

[www.boostingcollegecompletion.org/2012/08/policy-in-perspective-using-workforce-data-to-study-postsecondary-productivity/](http://www.boostingcollegecompletion.org/2012/08/policy-in-perspective-using-workforce-data-to-study-postsecondary-productivity/)

The second post explores how state legislators have set the groundwork for workforce alignment by examining workforce trends, measuring postsecondary system capacity, and tailoring state investments to workforce needs.

[www.boostingcollegecompletion.org/2012/04/policy-blog-workforce-alignment/](http://www.boostingcollegecompletion.org/2012/04/policy-blog-workforce-alignment/)

## Other Resources

### State Return on Investment Indicator

This policy brief and instrument, created by the National Center for Higher Management Systems, allows policymakers to estimate the state return on its education expenditures, in terms of tax revenue.

[www.clasp.org/admin/site/publications/files/Full-Paper-The-Credential-Differential.pdf](http://www.clasp.org/admin/site/publications/files/Full-Paper-The-Credential-Differential.pdf)

### HR Policy Association Blueprint for Jobs in the 21st Century

The framework document contains observations from the Fortune 300's Chief Human Resource Officers. One of their conclusions is that employers, educators, and state entities must work more closely if they wish to achieve economic growth.

[www.hrpolicy.org/downloads/blueprint/Blueprint%20for%20Jobs%20--%20Executive%20Summary.pdf](http://www.hrpolicy.org/downloads/blueprint/Blueprint%20for%20Jobs%20--%20Executive%20Summary.pdf)

### College Pays 2010

This College Board publication, published once every three years, examines the benefits of a postsecondary education and the expected economic returns for credentials, both across disciplines and geographies.

[trends.collegeboard.org/education\\_pays](http://trends.collegeboard.org/education_pays)

## Endnotes

- 1 Richard Arum and Josipa Roksa, *Academically Adrift: Limited Learning on College Campuses* (Chicago: University of Chicago Press, 2011).
- 2 Mark Schneider and Lu Yin, *The High Cost of Low Graduation Rates: How Much Does Dropping Out of College Really Cost?* (American Institutes for Research, 2011).
- 3 David Autor, *The Polarization of Job Opportunities in the U.S. Labor Market: Implication for Employment and Earnings* (Washington: Center for American Progress & The Hamilton Project, 2010), 23, <http://economics.mit.edu/files/6343> (accessed Sept. 2012).
- 4 Anthony Carnevale, Jeff Strohl, and Michelle Melton, *Selected Findings from What's It Worth? The Economic Value of College Majors* (Washington: Georgetown Center on Education and the Workforce, 2011), <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/whatsitworth-select.pdf> (accessed Sept. 2012).
- 5 Christopher Jepsen, Kenneth Troske, and Paul Coomes, *Labor Market Returns to Community College Degrees, Diplomas, and Certificates* (Lexington: University of Kentucky Center for Poverty Research, 2009), 30, <http://www.ukcpr.org/Publications/DP2009-08.pdf> (accessed Sept. 2012).
- 6 Anthony Carnevale, Stephen Rose, and Ban Cheah, *The College Payoff: Education, Occupation, Lifetime Earnings* (Washington: Georgetown Center on Education and the Workforce, 2011), 3, <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/collegepayoff-complete.pdf> (accessed Sept. 2012).
- 7 Dan Black, Natalia Kolesnikova, and Lowell Taylor, *Earning Functions When Wages and Prices Vary by Location* (St. Louis: St. Louis Federal Reserve Bank, 2007), 24-25, <http://research.stlouisfed.org/wp/2007/2007-031.pdf> (accessed Sept. 2012).
- 8 Anthony Carnevale, Nicole Smith, and Jeff Strohl, *Help Wanted: Projections of Jobs and Education Requirements through 2018* (Washington: Georgetown Center for Education and the Workforce, 2010), 8, <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/FullReport.pdf> (accessed Sept. 2012).
- 9 Patrick Kelly and Julie Strawn, *Not Just Kid Stuff Anymore: The Economic Imperative for More Adults to Complete College* (Washington: Center for Law and Social Policy, 2011), 1-2, <http://www.clasp.org/admin/site/publications/files/NotKidStuffAnymoreAdultStudentProfile-1.pdf> (accessed Sept. 2012).
- 10 United States Census Bureau, *Tables H-13 and H-14* (Washington: Census Bureau, 2011), <http://www.census.gov/hhes/www/income/data/historical/household/> (accessed Sept. 2012).
- 11 Institute for the Study of Societal Issues, *California's Economic Payoff: Investing in College Access & Completion* (Los Angeles: Campaign for College Opportunity, 2012), 14, [http://www.collegecampaign.org/index.php/download\\_file/view/641/216/](http://www.collegecampaign.org/index.php/download_file/view/641/216/) (accessed Sept. 2012).
- 12 David Demming and Susan Dynarski, *Into College, Out of Poverty? Policies to Increase the Postsecondary Attainment of the Poor* (Cambridge: National Bureau of Economic Research, 2009), 4-6, <http://www.nber.org/papers/w15387.pdf> (accessed Sept. 2012).
- 13 For more information on Course Signals, please visit <http://www.itap.purdue.edu/learning/tools/signals/>.

© 2012 by the Education Commission of the States (ECS). All rights reserved.

ECS encourages its readers to share our information with others. To reprint or excerpt some of our material, please contact ECS at 303.299.3600 or e-mail [ecs@ecs.org](mailto:ecs@ecs.org).

The Education Commission of the States is a nationwide nonprofit organization formed in 1965 to help governors, state legislators, state education officials, and others to develop policies to improve the quality of education. ECS is the only nationwide, nonpartisan interstate compact devoted to education at all levels.

[www.ecs.org](http://www.ecs.org)

Past issues of  
The Progress of  
Education Reform  
are available  
on our website at:  
[www.ecs.org/per](http://www.ecs.org/per).

This issue of *The Progress of Education Reform* was made possible by a grant from the GE Foundation. It was written by Matthew Smith, Associate Policy Analyst, ECS Postsecondary and Workforce Development Institute, 303.299.3698 or [msmith@ecs.org](mailto:msmith@ecs.org).



GE Foundation

Equipping  
Education Leaders,  
Advancing Ideas