

CENTER for POSTSECONDARY and  
ECONOMIC SUCCESS



# Using Post-College Labor Market Outcomes *Policy Challenges and Choices*

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## Introduction

Students and policymakers alike are calling for more data on former students' labor market outcomes, such as post-college employment and earnings. As these data become more readily available, lawmakers may be tempted to use it to hold institutions accountable for students' results in the labor market. This accountability could occur at the state level through outcomes-based funding or at the federal level, possibly by tying outcomes to title IV eligibility. In principle, measuring outcomes over inputs is a positive development. However, without a strong policy foundation, this could create incentives to reduce access for low-income and underprepared students and unduly punish the open-access institutions that serve them.

In general, CLASP recommends that post-college *earnings* data *not* be used for accountability at the institution level without taking into account differences between programs of study or college majors, student characteristics and institutional missions, variation in regional economies, students' various college and employment pathways, and institutions' mix of programs. This paper, informed by postsecondary education practitioners and workforce educators who are particularly attuned to the importance of post-college outcomes presents five recommendations that policymakers should follow *before* they consider using earnings for high-stakes accountability purposes:

- 1) Use program-level, not institution-level, data;
- 2) Take participant characteristics and/or institutional missions into account;
- 3) Index earnings to regional wage and economic benchmarks;
- 4) Disaggregate completers from non-completers; and
- 5) Take into account the social good of programs that may have low wages.

## Labor market outcomes matter to students

While money may not be the only outcome students care about, it is certainly important.<sup>i</sup> In a survey by UCLA's Higher Education Research Institute, three of the top four reasons that 2014 first-time freshman cited as "very important" in deciding to go to college are related to labor market success: getting a job (86.1 percent), training for a career (77.1 percent), and making more money (72.8 percent).<sup>ii</sup>

This is particularly true for those from lower-income brackets. In a New America survey of prospective and recently enrolled students ages 16 to 40, 90 percent of those with incomes less than \$50,000 (lowest group) said that getting "a good job" was an important or very important reason to go to college. Ninety-one percent of the same group said making "more money" was an important or very important reason for going to school.<sup>iii</sup>

## Labor market outcomes matter to policymakers

The Obama Administration, U.S. Congress, and state governments are all tackling the issue of reporting and using post-college labor market outcome data. For the first time, the U.S. Department of Education has included earnings data in its updated "College Scorecard." A growing number of states have created websites that display the earning and employment outcomes of students in specific programs of study at specific degree levels. In addition, legislation introduced in Congress would create a student-level data collection that includes employment and

earnings. The next few years may provide an important window for policy related to employment and earnings data. We'll look at each opportunity in turn.

### The Administration released the new “College Scorecard”

In September 2015, the Department of Education released an updated [College Scorecard](#), a consumer-facing data tool that allows students to explore information on college cost, graduation, debt, and—for the first time—post-college earnings. Students can now view median earnings of institutions' former students 10 years after enrollment, as well as the percentage of the institutions' former students who earn more than a typical worker with a high school degree. The consumer-oriented scorecard followed more than a year of stakeholder input on the Administration's initial plan—now shelved—for a federal college ratings system that would be used for accountability, conditioning the school's eligibility for title IV financial aid programs on its rating.

The same day the scorecard was announced, the Department publically released a trove of data for researchers, including new institution-level data on students' post-college earnings. The institution-level data were obtained by comparing information on cohorts of students who received federal student financial aid with earnings data from tax records from the Treasury Department. Individually identifying information was removed and reported back at the aggregate level for each school.

A variety of metrics are now available, including median earnings in years six through 10 after enrollment in postsecondary education. The data also include the share of students earning more than \$25,000 per year (roughly the expected earnings for a high school graduate) in order to answer the question: “What proportion of a school's students end up making more than a typical worker with only a high school diploma?” The data can be disaggregated by gender, dependency status, and family income as reported on the Free Application for Federal Student Aid (FAFSA). There are two notable limitations of the data in both the scorecard and data release: they are available only for students who received federal student aid loans and/or grants, and they are reported only at the institution level because program-of-study-level data are not yet available.

With all this new data available, it is important to have a discussion of responsible uses. The data are currently available for consumer information and transparency purposes only. The Department does not currently intend these data sets for higher-stakes uses like performance-based funding or federal accountability tied to Title IV eligibility. However, there is nothing to stop others from adopting them for such purposes.

### States have taken the lead

In recent years, amidst policy debates about what would become the revised College Scorecard revisions, some states were already taking action. A number of states have paired with College Measures to create consumer information websites that display employment and earnings data by degree level and program of study. [College Measures](#) states include [Arkansas](#), [Colorado](#), [Florida](#), [Tennessee](#), [Texas](#), and [Virginia](#). Other states like [California](#) and [New Jersey](#) have independently created websites that present program-level earnings data to help students make better choices about colleges and majors or programs.

States have also taken the first small steps toward basing funding allocations in part on labor market outcomes. Among the 30 states with outcome-based funding models, only seven include some form of labor market metric (employment/placement or earnings).<sup>iv</sup> Notably, only one state, Florida, requires the use of post-college *earnings* of

bachelor's graduates in its funding formula, while Kansas makes earnings an optional measure for community and technical colleges.

## Legislative proposals in Congress

A bipartisan, bicameral group of federal lawmakers has introduced legislation that would create a student-level data collection system that would include a wealth of labor market outcome data. The bill, known as the “Student Right to Know Before You Go Act,” would require median annual earnings and employment metrics—disaggregated by program of study, credential received, institution, and state of employment—to be reported 2, 6, and 15 years after completion. This bill could be included in the debate and draft legislation to reauthorize the Higher Education Act (HEA) as early as next year.

## Potential negative impacts on low-income and underprepared students

As the Administration, states, and potentially Congress make more data available for consumer information, there will be great temptation (and pressure) for policymakers to use it for accountability purposes—linking state funding for higher education institutions to labor market outcomes or conditioning federal funding on labor market outcomes through title IV eligibility.

Once collected and published, post-college labor market outcome data are like a genie out of the bottle. CLASP is very concerned that these data could be used for high-stakes accountability in a way that will reduce access for low-income and underprepared students and threaten the open-access mission of community colleges. The remainder of this paper describes strategies to mitigate such concerns.

The analysis is informed by CLASP’s qualitative research, including focus groups, interviews, and a survey of postsecondary education practitioners and workforce educators who are particularly attuned to the importance of post-college outcomes. The groups include the National Council on Workforce Education (NCWE), National Association of Workforce Boards (NAWB), and National Association of State Directors of Career Technical Education Consortium (NASDCTEc). It is also informed by a scan of state outcomes-based funding formulas, voluntary accountability initiatives, performance measures for other federal education and training programs, and state consumer information websites. Our overarching recommendation is as follows:

### **Accountability or performance-based funding should not be based on raw institution-wide earnings data, for five reasons:**

1. Using one average earnings metric that includes *all* former students of an institution masks wide variation in earnings among graduates of different majors or programs of study.
2. Student characteristics and institutional missions influence institution-level earnings.
3. Differences among regional labor markets lead to variation across institutions that is not necessarily reflective of the quality of education.
4. The value-added of college for non-traditional students, a rapidly growing population, may not be well represented by a standard measure of graduates’ earnings.
5. Institution-level earnings are highly influenced by program mix.

### **Using Post-College Labor Market Outcomes**

## Recommendations

Building from these five policy challenges, and informed by our work with NCWE, NAWB, and NASDCTEc, CLASP presents five policy recommendations or policy choices that federal and state policymakers should consider before using labor market outcomes for accountability.

### 1. Use earnings/employment data by program of study, not institution-wide

If policymakers opt to use earnings data for high-stakes accountability, they should not use an institution-wide metric. Rather, they should use data disaggregated by major or program.

Students' major or program can be as important as their choice of school to post-college labor market outcomes. According to a 2015 study by the Georgetown Center on Education and the Workforce, entry-level college graduates earn an average of \$37,000 per year. However starting salaries widely vary by major. The average STEM major earns \$43,000 upon entering the workforce, while arts, liberal arts, and humanities majors earn an average of \$29,000 per year.<sup>v</sup>

For transparency and consumer information purposes, it is critical that students have information on employment and earnings outcomes for the variety of majors in the school they choose. For this reason, the College Scorecard should be augmented to include program-level data. This information is especially important for low-income and under-prepared students, who are often place-bound. While they may not have many schools to choose from within their commuting area, they can choose among a variety of programs of study.

For accountability or outcomes-based funding, an institution-wide metric may not provide an accurate picture of different programs' success. It may conceal strong labor market outcomes for graduates of some programs while hiding poor outcomes produced by other programs. An institution with one high-quality, high-paying major with many students should not mask the results of programs that produce less labor market success than similar programs at similar schools.

In CLASP's conversations with educators and practitioners from NCWE and NAWB, many participants began with the assumption that labor market outcome data would be provided at the program-of-study level. For instance, an NAWB participant said that labor market outcomes are useful in counselling students on what to study, while an NCWE member noted that low-enrollment programs would be hard to provide results for.

When asked more directly, an NCWE participant said that "students want to know about specific jobs and salaries," while another noted that "individuals need to be able to see earnings results in various programs." The survey of workforce educators from the NCWE membership underscored this idea; nearly 9 in 10 (89 percent) of the 205 respondents said that "separate results for program of study" was an important or very important feature of a postsecondary data system.

In addition, the number one "lesson from the field" taken away from the College Measures experience is that "School-level reporting isn't enough."<sup>vi</sup> Students graduating from the same institution can have widely different earnings, depending on their program or major, so prospective students need to know outcomes at the program level *within* a given institution. Therefore, it is not surprising that most College Measures websites appropriately present earnings by both program and degree level (i.e., Certificate, AA, BA, MA) for each institution.

## 2. Take participant characteristics and/or institutional mission into account

If policymakers opt to use earnings data for accountability, they should take into account participant characteristics and/or institutional mission.

Using raw earnings for accountability could create unintended, negative consequences for low-income and underprepared students. If the bar is set too high or the consequences are too great, schools may become more selective, leaving behind those most in need.

The three groups that CLASP interviewed shared the same concern: using labor market outcomes for accountability could hurt low-income and underprepared students, particularly at community colleges because of their open access policies and mission. In addition, 70 percent of respondents in our survey of NCWE members agreed that performance-based funding could have unintended negative consequences. Half of respondents said the same of a federal college ratings system, which was proposed by the Obama Administration but later became the updated College Scorecard.<sup>vii</sup>

There were two variations on these concerns: 1) community colleges could restrict access for less-prepared students; and 2) if community colleges *don't* restrict access, they could be penalized by the accountability system and thus less able to serve students.

### ***Concern about restricted access because of participant characteristics***

Participants from NASDCTEc and NAWB raised concerns that community colleges might restrict open-access admissions in order to meet accountability requirements. One State Director of CTE said that if earnings were used for accountability, then open access at community colleges "will be over." Assuming that community colleges would restrict access, an NAWB participant remarked: "If we do what we need to do to meet those measures, then who's going to serve needy students?" Research from the Community College Research Center supports their concerns regarding performance-based funding in general. Among more than 200 college personnel at nine universities and nine community colleges in three states with performance-based funding, restricting access for less-prepared students was the most frequently cited unintended impact.<sup>viii</sup>

### ***Concerns about community colleges' capability given institutional mission***

Participants from NAWB were concerned that community colleges would not be able to serve students well if they failed accountability requirements. One participant said that four-year schools would raise their standards and community colleges would "be penalized by the accountability system." Another participant said that the proposed Postsecondary Institution Rating System, which was originally envisioned as an accountability tool, would be "impossible at two-years" because of open enrollment. "If [community colleges] can't make the standard that is set, [the federal government] pulls financial aid and Pell grants," which would debilitate community colleges.

We also probed for possible solutions through the CLASP survey of NCWE members, asking: "Based on your experience, are there ways to reduce these unintended negative consequences? What are they?" Sixty-four respondents answered with a wide variety of suggestions. One major theme was the need to adjust requirements to account for serving underprepared students. One respondent suggested the "use of bonus points for serving people with barriers." Another added that institutions should "receive weighted performance when serving low-income and underprepared students." A respondent who worked for a Workforce Investment Board (as opposed to most NCWE

participants, who worked for community colleges) suggested “using regression models to account for serving low-income, hard to serve, and underprepared students.” Federal workforce programs under the Workforce Innovation and Opportunity Act of 2014 (WIOA) are required to use a regression adjustment model to take into account participant characteristics, including variety of barriers to employment as well as economic conditions. The WIOA model could inform adjustments in the postsecondary policy environment.

Adjusting for student characteristics and institutional mission can be done in a number of ways. A regression adjustment model, as used by the federal workforce system, is just one option. Another, potentially stronger option is to create rigorous peer comparison groups within which schools could responsibly be compared. The Department of Education’s draft framework for the proposed college ratings system (which became the College Scorecard) asked many questions about how to structure such comparison groups. CLASP’s response recommended grouping institutions along key institutional differences that have strong predictive power for the outcome metrics, including:

Student characteristics, such as shares of

- Pell recipients, or recipients of other need-based aid;
- Low-income students based on FAFSA data; and
- First-generation college status.

Institutional characteristics, such as

- Level of selectivity (e.g., percent of applicants admitted);
- Primary types of credentials granted (awards, certificates, associates, bachelors, advanced); and
- Percent of students attending other than full-time.

### 3. Index to regional wage/economic benchmarks

If policymakers opt to use earnings data for accountability, they should take into account regional labor market differences by using economic benchmarks to contextualize wage data.

Post-college earnings vary by regional labor market. Specifically, students in rural markets experience very different outcomes than those in urban or suburban markets. Earnings also vary based on labor market demand at the time of graduation, particularly during recessions or expansions. However, institutions have next to no control over these influences. Should schools be held accountable for external economic conditions over which they have no power? Are schools in areas with higher average wages and living costs necessarily doing better merely because their students stay in their location and make more after graduation?

An issue discussed by all three groups was the challenge of comparing institutions from different regional labor markets. The comments broke down into two groups: changes in earnings through the economic cycle in one location; and the differences in regional economies, such as how urban and rural labor markets produced different earnings. The big takeaway was that regional economies affect graduates’ earnings in a way that schools cannot control.

### ***Differences during vicissitudes of the economic cycle***

All three groups discussed the impact of the economic cycle, particularly recessions, on graduates' employment and earnings. Individuals from two groups described how labor market outcomes are influenced by both the preparation of the students and the local economy. Others expressed the specific concern that employment and earnings are "subject to the economic ups and downs of your region," in the words of one participant, and therefore schools did not have total control over employment and earnings. One individual stressed that we cannot hold schools accountable for recessions, noting that his state only has 65 percent of the jobs it had in 2008 and that new jobs are lower paying. He added: "The economy in your state tanks and somehow it's the school's fault?" The groups did not address whether expansion times in the economic cycle would positively influence or inflate graduates' employment and earnings outcomes, although this would likely be the case.

### ***Differences in regional economies***

Community college officials at CLASP's focus group with NAWB members regularly raised the challenge of lack of comparability in earnings because of regional economic differences. In general, they focused on the variation in earnings between urban and rural labor markets. One participant from a rural area in Tennessee said, "We don't pay what they pay in Nashville. It's a very difficult situation." These concerns are echoed by those involved in the handful of College Measures websites that display graduates' earnings by program, degree level, and institution. They note that "graduates from campuses near major metropolitan areas benefit from access to stronger regional labor markets where wages are higher than in more remote areas."<sup>ix</sup>

The NAWB participants proposed solutions to the challenge of regional labor market variation. A number of individuals said that the earnings data should be "contextualized," "compared," or "benchmarked" to the local economy. "Wages need to be measured not against each other, but against the [local] environment," said one participant. She continued, "if you have nothing to benchmark [earnings] against, it's going to be meaningless information."

An example of this contextualization is already in effect. The Aspen Institute uses community college graduates' earnings in the selection process for the Aspen Prize for Community College Excellence. But comparing community colleges in rural areas to urban areas and to suburban areas would be unfair. So they use "relative wages," which are annualized wages of employed graduates 12 months after graduation, divided by the average annual wages for new hires in the county. This allows the Aspen Institute to determine which community colleges' graduates are doing well compared to other new hires in their county. Relative wages above 1.0 indicates graduates are doing better on average than new hires in their local economies, while relative wages below 1.0 show that graduates are faring more poorly than other new hires in their county.

In addition, College Measures state consumer information websites include statements reminding students, parents, and policymakers of the effect of regional differences. They may also elect to present both actual median wages and median wages adjusted by regional costs of living.

## **4. Disaggregate completers from non-completers**

CLASP recommends that post-college labor market outcomes be computed for graduates and non-graduates separately **and** together.

There are a number of important policy questions to consider. Which students are included in labor market outcomes, and to what extent were their earnings influenced exclusively by college? Were students in the labor market before attending school? Did they complete a degree or leave without one?

In the College Scorecard, the Department of Education addressed this issue by measuring both completers and non-completers some number of years after *enrollment*. While one strength of this approach is that it includes all students, it does not allow students to see differences between graduates and non-graduates. On the other hand, state consumer information websites handle the issue differently; they typically include only completers in their data, allowing students to see only one part of the story, but to see it clearly. However, neither of these approaches fully takes into account whether students' previous or ongoing labor market experiences influence their post-college earnings.

### ***Many students work before and during college***

When people think of post-college labor market outcomes, they often think of a student's first salary coming out of college at 22 years old. However, this view is outdated. An increasing share of students in postsecondary education are from "non-traditional" age groups and come to college with past and ongoing work experience. Participants in the NCWE group were quick to point out that many students work before enrolling in postsecondary education. In addition to students who worked full time prior to higher education, 27 percent of students are employed full time while in school and another 39 percent work part time.<sup>x</sup> A participant from NCWE explained that many students at her institution are "working in the field *while* going to school, as opposed to working in the field *after* going to school." Participants from the NAWB group argued that for many of the types of students described above, post-college earnings do not represent the value-added from college. For these students, prior and current work experience and earnings levels strongly influence post-college earnings—perhaps even more than college itself.

For NCWE and NAWB participants, the clear answer to this problem is to measure both pre- and post-college earnings, creating an earnings gain measure. This, they argued, would better represent the outcome of their students' education.

### ***Some students are not pursuing a degree***

Students who do not graduate are typically not included in labor market outcome metrics. But many non-traditional students have no intention of "graduating." Participants from the State Directors of CTE agreed that not all students are pursuing the goal of a degree. Many of their students are working toward a non-degree, industry-recognized credential, which is one of the performance measures for federal postsecondary CTE Perkins Act funding. Further, they note, some students are "skills-builders," a term that describes students who participate in workforce training that does not necessarily lead to a community college credential.<sup>xi</sup> An NCWE participant added that some students at her institution are using tuition reimbursement from their employer to take "one or two classes." Others are in "job search mode and must work when they can." Waiting until graduation to include these students in employment and earnings measures may miss a good proportion of students at these institutions for whom "graduation" is not a relevant milestone.

The suggested method for capturing the value-added of college for these individuals is to report earnings for completers *and* non-completers. In our survey of NCWE members (n=205), 80 percent of respondents said that having separate results for completers versus enrollees was an important or very important feature of a

### **Using Post-College Labor Market Outcomes**

postsecondary data system. For community colleges, one participant argued, non-completers “may make better wages if they leave school to get a job in their field when the job is available.” She provided an example from North Dakota: companies in oil and gas will recruit from the community college programs, sometimes with signing bonuses, so students leave before earning a credential.

The extent to which such anecdotes apply broadly is unknown, although it seems plausible during a boom time in a local industry. Arguably, when labor demand slacks, students will generally earn more completing a degree than not completing a degree, especially in the long run. Nonetheless, completers are clearly not the same as non-completers and both groups’ earnings should be captured, disaggregating the data by completion status.

## 5. Take into account programs that provide skills that meet community/labor market needs, even if these jobs have lower average earnings

Colleges with more students in programs that provide skills needed by the community but that may not pay high wages, such as child care workers, emergency medical technicians, social workers, and teachers, will often have lower institution-wide average earnings among their former students, even if their programs provide high-quality workforce preparation. While there is not yet a standard method for addressing this aspect of college value, there are examples of systems that are attempting to quantify social good along with the economic benefit.

Payscale.com, a website with a large salary profile database, gathers earnings data from self-reported online surveys. In addition to salary, job, major, and other information, Payscale notably asks every survey participant: “Does your work make the world a better place?” The majors that lead to jobs with the highest percentages of affirmative responses are labeled the “Most Meaningful College Majors.”<sup>xii</sup>

In another example, the Kentucky Community and Technical College System has designed a “social-utility index,” which calculates the social good of degree programs leading to jobs that, while low paying, are important to communities.<sup>xiii</sup> To add nuance to the ongoing conversation about the best-value degrees, their index uses multiple criteria, including Payscale’s meaningfulness measure, whether programs lead to a career pathway, and whether programs are important to the regional economy.<sup>xiv</sup>

## Conclusion

Students and policymakers need access to more and better labor market outcome data. Federal and state efforts are on the way to making that a reality. But what happens when earnings and employment data become more available for consumer information? Almost undoubtedly, policymakers will want to use it for accountability purposes. And if not done carefully, this could have negative consequences for low-income and underprepared students and the institutions in which they are served.

CLASP urges policymakers not to use post-college earnings data for accountability purposes without first taking into account program or major, student characteristics and institutional mission, variation in regional economies, students’ various college and employment pathways, and institutions’ program mix. It’s critical that policymakers understand the five recommendations or policy choices described above before holding schools accountable for their former students’ labor market outcomes. Each recommendation has its challenges, and more work is needed to identify the best approaches. However, if these five issues are not addressed, policymakers should strongly consider excluding labor market outcomes from any accountability formula or framework.

## Endnotes

<sup>i</sup> Tim Harmon, Neil Ridley, and Rachel Zinn, *Workforce Results Matter: The Critical Role of Employment Outcome Data in Improving Transparency of Postsecondary Education and Training*, Center for Law and Social Policy (CLASP), 2014, <http://www.clasp.org/resources-and-publications/files/2014-04-29-CLASP-Workforce-Results-Paper.pdf>.

<sup>ii</sup> Kevin Eagan, Ellen Bara Stolzenberg, Joseph J. Ramirez, et al., *The American Freshman: National Norms Fall 2013*, Higher Education Research Institute at UCLA, 2015, <http://www.heri.ucla.edu/monographs/TheAmericanFreshman2014.pdf>.

<sup>iii</sup> New America, 2015, “2015 College Decisions Survey.” Unpublished tables provided by author Rachel Fishman.

<sup>iv</sup> The seven states include Florida, Kansas, Louisiana, Missouri, Tennessee, Utah, and Wisconsin.

<sup>v</sup> Anthony Carnevale, Ban Cheah, and Andrew Hanson, *The Economic Value of College Majors*, Georgetown Center on Education and the Workforce, 2015, <https://cew.georgetown.edu/wp-content/uploads/The-Economic-Value-of-College-Majors-Full-Report-Web.compressed.pdf>.

<sup>vi</sup> Mark Schneider, *Measuring the Economic Success of College Graduates: Lessons from the Field*, 2015 [http://www.air.org/sites/default/files/downloads/report/Measuring%20the%20Economic%20Success%20of%20College%20Graduates\\_Mark%20Schneider.pdf](http://www.air.org/sites/default/files/downloads/report/Measuring%20the%20Economic%20Success%20of%20College%20Graduates_Mark%20Schneider.pdf).

<sup>vii</sup> U.S. Department of Education, “Helping Families Navigate their Higher Education Options,” *HomeRoom: The Official Blog of the U.S. Department of Education*, June 2015, <http://www.ed.gov/blog/2015/06/helping-families-navigate-their-higher-education-options/>.

<sup>viii</sup> Hana Lahr et al., *Unintended Impacts of Performance Funding on Community Colleges and Universities in Three States*, November, 2014, Community College Research Center Working Paper No. 78.

<sup>ix</sup> Schneider, *Measuring the Economic Success of College Graduates*.

<sup>x</sup> The Center for Postsecondary and Economic Success at CLASP, “Yesterday’s non-traditional student is tomorrow’s traditional student.” 2015, <http://www.clasp.org/resources-and-publications/publication-1/CPES-Nontraditional-students-pdf.pdf>.

<sup>xi</sup> Kathy Booth, *The Ones That Got Away: Why Completing a College Degree is Not the Only Way to Succeed*, LearningWorks and WestEd, September 2015, <http://doingwhatmatters.cccco.edu/portals/6/docs/TheOnesThatGotAway.pdf>

<sup>xii</sup> Payscale, “2015-2016 PayScale College Salary Report: Most Meaningful College Majors,” 2015, <http://www.payscale.com/college-salary-report/most-meaningful-majors>.

<sup>xiii</sup> Eric Kelderman, “A College Systems Measures How Low-Paying Degrees Serve the Public Good” *The Chronicle of Higher Education*, August 5, 2015, <http://chronicle.com/article/A-College-System-Measures-How/232191/>.

<sup>xiv</sup> Christina Whitfield, “Focusing on Student Outcomes and Return On Investment,” lecture, SHEEO Higher Education Policy Conference, Newport Beach, CA, August 4, 2015, [http://chronicle.com/blogs/ticker/files/2015/08/SHEEO\\_SU\\_080415.compressed.pdf](http://chronicle.com/blogs/ticker/files/2015/08/SHEEO_SU_080415.compressed.pdf).