



**Testimony of Dr. Mark Schneider
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The nation invests untold billions of taxpayer dollars in its higher education system. Students and their families pour even more into a system that often is thought of as “the best in the world.” While clearly the nation has the lion’s share of the world’s great universities, we also support hundreds upon hundreds of campuses that are not doing a good enough job of educating their students, graduating them, or helping them find jobs—which, according to a recent study by the Higher Education Research Institute of California, is the number 1 goal of today’s college students.

Further, we have only rudimentary knowledge about how well all those billions are being spent. We do know that the United States spends more on higher education than any other nation in the Organization of Economic Cooperation and Development (OECD),¹ but we have only limited insights into which institutions are spending their money more efficiently than others and which are generating a higher return on investment for students and taxpayers.

Our inability to document student and institutional success all too often traces back to limits in the nation’s primary system of higher education data collection, the Integrated Postsecondary Education Data System (IPEDS).

IPEDS would be a pretty good data system for the 1950s, but IPEDS is flawed—perhaps fatally so—given our current system of higher education.

- When it comes to students, its coverage is too limited to represent the changing population of students enrolled in America’s colleges and universities.
- When it comes to capturing different aspects of student success in college, IPEDS measures far too few.
- When it comes to the crucial issue of how much higher education costs, IPEDS comes up short. Yes, we can use IPEDS data to tease out some rudimentary information about costs (thanks largely to the Delta Project started by Jane

¹ According to the OECD’s 2012 Education at A Glance, the United States spends around \$29,000 per higher education student compared to the OECD average of \$13,728.

Wellman and now at the American Institutes for Research, where I work). But these insights don't begin to meet our information needs.

- And when it comes to measuring taxpayers' return on the investment (ROI), we have to make some heroic assumptions to even approximate what taxpayers get in return for the vast sums they invest in colleges and universities.

The nation can do better.

With that in mind, I will sketch some of the metrics needed to better measure the performance of our colleges and universities. I'll use four categories to keep it simple:

- Student success while in college
- Student learning outcomes
- Student success in the labor market
- Costs of degrees

I will zero in on what I see as some of the most promising developments in each category and discuss some of their benefits and costs. Then I'll take on the issue of risk adjustment to allow comparisons across institutions that serve different student populations. I'll end by comparing the present regulatory mentality of the US Department of Education's approach to measuring student success in the labor market with a consumer information approach that I believe works better with the data we have. A consumer-oriented approach could make it easier to find and use not only data on employment outcomes, but other types of information on college performance as well.

Student Success While in College

Improving student success in college requires addressing three related processes: retention, progression, and completion. To earn a degree or a certificate, students have to stay enrolled (retention), they have to accumulate enough credits in a timely way (progression), and ultimately they have to finish school (graduation). We need far better measures of all three processes and we need to track far more students than we do now.

As is well known, IPEDS concentrates on full-time, first-time beginning students. Unfortunately, this group represents fewer than half of all students in the country. And even for these students, IPEDS' measures of student success are limited.

While IPEDS does report first-year retention rates for both full-time and part-time students, it doesn't tell us the rates at which students stay in school after their first year, it has no information on student progression, it doesn't count most transfer students, it

doesn't calculate student success metrics for many groups of students that are central to the nation's policy concerns (such as recipients of Pell grants) and has no information at all about student success after graduation.

Slowly (and, we must hope, surely), we are making progress on fixing these problems. Most notably, the National Governors Association is leading states to endorse Complete College America's (CCA) student success metrics, which will allow us to more accurately measure the success of far more students enrolled in colleges and universities than is possible with IPEDS. That's because these metrics are based on student-level data (held by the states, not the federal government), data that are much finer grained and more accurate and that cover more students than IPEDS.

One area of student success that CCA emphasizes is credit accumulation—an intermediate step between retention and completion. The aim of this measurement is to determine the proportion of undergraduates making steady academic progress during an academic year. Students can return semester-after-semester, but if they aren't completing courses and earning credits at a pace that will allow them to get a bachelor's degree within 6-8 years or an associate's degree in around 4 or so years, many will likely never graduate. Capturing the percentage of students who are progressing fast enough toward their degree is one measure to which IPEDS needs pay far more attention.

These kinds of student success measures are built on student-level data that most campuses and states should have and that can be compiled both relatively quickly and cheaply. Moreover, they can be produced now, without a long lead time. In turn, I believe that we can vastly improve our measurement of student success without imposing undue burden on states or campuses—something about which we all need to be mindful.

Despite its importance, the CCA effort isn't broad enough. Yes, over half the states in the nation now provide Complete College America with expanded metrics, but these cover only public institutions and currently the data are not reported at the campus or program level.

Student Learning

Higher education is about just that: educating students. However, the task of *actually* measuring how much college students have learned is just beginning to gain traction.

Critics have long suspected that far too many colleges are not improving student skills. Richard Arum and Josipa Roksa's book, *Academically Adrift*, elevated that concern from faculty office anecdotes to a headline issue.

Arum and Roksa show that during their first two years of college, almost half of the students in their study did not improve in critical thinking, complex reasoning, or

writing. Moreover, they show that students are distracted by socializing or working and that many colleges and universities put undergraduate learning close to the bottom of their priorities.

One of the strengths of *Academically Adrift* is its empirical base. Rather than asserting that students are not learning, Arum and Roksa used the Collegiate Learning Assessment (CLA) to measure students' cognitive skills. Among the growing number of college student assessments, the CLA has so far attracted the most attention; however, other assessments are available (such as the College Board's Collegiate Assessment of Academic Proficiency or ETS' Proficiency Profile test) and more will likely be coming to market as policymakers demand measures of the value added of college education.

My preference is for actual assessments of learning outcomes, such as CLA, not the less telling process-oriented studies such as the National Survey of Student Engagement (NSSE) and the Community College Survey of Student Engagement (CSSE). While some NSSE and CSSE questions are more valid on their face than others—for example, those on how often students wrote research papers or talked with faculty—overall NSSE and CSSE measure process, not outcomes, so their correlation with, say, graduation rates, is low.²

There are questions about the cost of CLA (and other such assessments) and questions about how students approach low-stakes tests. But even more important are questions about the role the federal government should play in college assessments. Within those constraints, Congress should continue to monitor the progress of efforts to evaluate how much students learn and how much college helps them build their skills.

Student success in the labor market

While improving measures of student learning and student progress are important, ultimately we need to assess the extent to which labor markets are validating the level and usefulness of the skills college graduates possess.

About half the nation's states can now link student-level data that document each collegian's experiences (including major field of study) to unemployment insurance records that can track post-graduation earnings. These data let us compare the returns on the investment students and taxpayers have made in, say, a student with a bachelor's degree in sociology to the investments in a similar student who earned a bachelor's degree in English literature from the same campus.

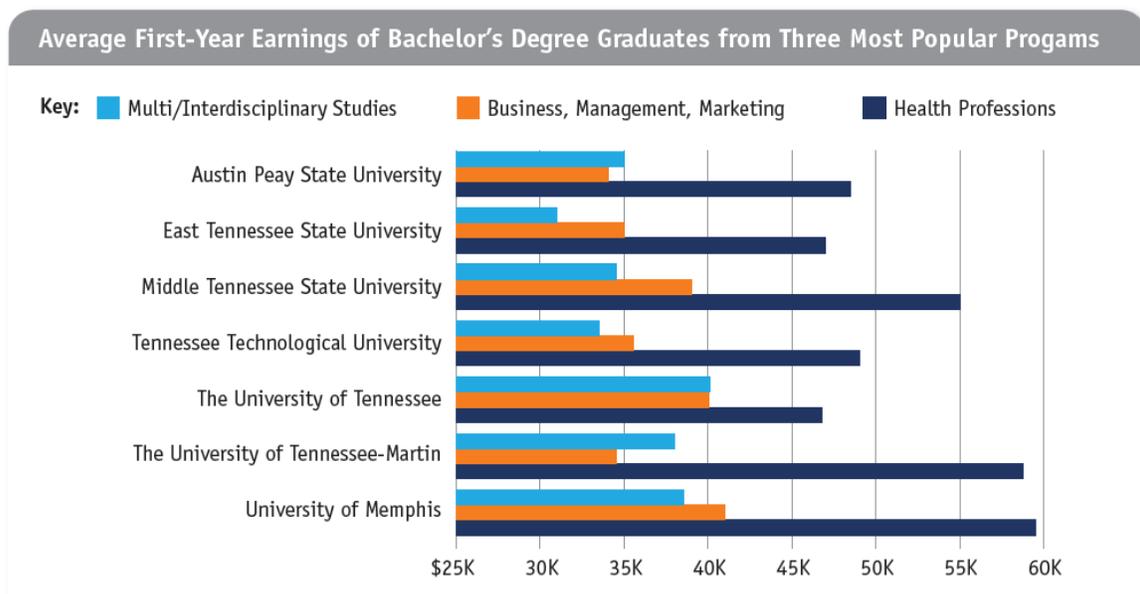
Perhaps even more important, these linked data let us measure the returns to students with the same credential coming from different campuses. Students and policymakers

² For example see FALSE FRONTS? Behind Higher Education's Voluntary Accountability Systems by Andrew P. Kelly and Chad Aldeman. Available at: http://www.educationsector.org/usr_doc/False_Fronts.pdf and Assessing NESSE by Mark Schneider. Available at <http://www.insidehighered.com/views/2009/11/24/schneider>

can therefore compare how successful students with, say, a bachelor’s degree in materials sciences from one school match up to students with the same degree from another campus. While higher education is about many other things besides labor market success, for most students, their families, and state policy makers, higher education is the ultimate economic development strategy. So all need to know how students fare after they graduate.

On September 18, 2012, I released data documenting the first-year earnings of graduates from programs across public institutions in Tennessee. These data document how much variation there is in the earning power of graduates from diverse fields of study—but the data also show how much variation there can be in the earnings of graduates from the same field of study across different institutions.

As this graph from the report shows, there is nearly a \$15,000 difference in first-year earnings of bachelor’s degree holders in the same area of study, the health professions, from the University of Memphis versus graduates from the University of Tennessee. A smaller gap, but still around \$7,000 in first-year earnings, separates graduates from the University of Tennessee in Multi/Interdisciplinary Studies from graduates from East Tennessee State. Note also that while Tennessee State graduates in Health professions lagged every other campus, their graduates in Multi/Interdisciplinary Studies were the highest paid in the state, on average, for students with this major. This reinforces the need for information about specific programs—because, to repeat, success often is not uniform across programs or across institutions.



Tennessee data, not presented here, also show how well many students with technical two-year degrees from community colleges do in the job market—where often their wages exceed those of students earning a bachelor’s degree. And, like the chart above,

the data also show how much earnings variation there is between graduates of different community colleges in the same field of study.

Students and their families should have this information at their fingertips so they can make better informed decisions about where to enroll, what to major in, and how much debt they might comfortably take on relative to their likely earnings. About half the states have linked their student-level data with the unemployment insurance wage data (an effort supported by the federal State Longitudinal Data Systems grant program). But while many states have linked these data, few states have made those linked data known or easily available to the public, to individual campuses, or their state legislatures.

I am working with six states—Arkansas, Colorado, Nevada, Tennessee, Texas and Virginia—to get measures of the economic success of graduates into the public sphere. The Tennessee data and an accompanying report were released September 18th. Arkansas data were released in August, and the Virginia data will appear in October. The data for Arkansas and Tennessee are easy to search and compare at www.collegemeasures.org and the other states' data will be made available in the next few months.

Cost of Degrees

Finally, we need more accurate data on the cost of producing college degrees. And let's not confuse cost with price here.

Most consumers worry about price and know little about cost. If we go to Wal-Mart to buy a roll of paper towels and the price is \$1.00, the fact it may cost 30 cents to produce is rarely on our radar screens. Consumer ignorance of cost is even more prevalent when government subsidies cloud the difference between price (what we pay for something) and cost (what it costs to produce it). When we look at a highly subsidized service, such as higher education, the divergence between price and cost can be substantial. In short, a college diploma that carries a low price tag can cost far more than people realize.

Any discussion of the cost of degrees must be attuned to their *full cost*, including taxpayer subsidies, and must be standardized by success (e.g., number of completions). Without taking both factors into account, taxpayers will be left with the false impression that a degree or certificate is cheap (because tuition price is low), even though it may be quite expensive when all costs are totaled.

We know that costs are driven by such things as (a) the mix between upper division specialized courses versus lower division general education ones and (b) the mix of majors—after all, physics labs cost far more than language labs. And the mix of students and majors also may vary with each campus' particular mission. True degree costs, then, must reflect all these variables.

Many accounting issues also need to figure in any discussion of degree costs. For example, how should we allocate spending on research and administrative support? We have little information on capital costs, which in many campuses exceed operating costs. In short, the budgets of most higher education institutions are both sketchy and opaque, featuring little of the true grist needed to even start tabulating what a student's education costs taxpayers or how much campuses spend per degree.

We also have no reliable way of estimating how much the tax exempt status of public and not-for-profit colleges and universities costs taxpayers. In more and more cities, for instance, conflicts are emerging between “town” and “gown” over payments in lieu of taxes (PILOTS). Fiscally strapped municipalities where tax exempt institutions represent a significant share of their potential tax base (Boston and Providence come to mind here) are looking to campuses for some form of payment—but under current law payment is at the campus' discretion. And tax exempt institutions pay no income or sales taxes—in contrast to for-profit education systems, for which corporate taxes are likely over 10% of revenues and sales taxes 1 or 2 percentage points. These exemptions are real taxpayer costs but are “off the books” so often go unnoticed.

Given these, and other related issues, we have no way of knowing how much taxpayers are investing in degrees through direct appropriations and through subsidies. And without an accurate cost accounting, it's hard to begin to assess the rate of return to taxpayers for their investment in higher education. I have been exploring this work with Jorge Klor de Alva, president of the Nexus Research and Policy Center. Last year we published a study of bachelor's degrees and are now studying taxpayer returns on associate's degrees.³

Risk Adjustment

Higher education institutions in the United States vary widely in their missions, the students they serve, and the resources they have to educate those students. Many argue that a “one size fits all” approach to any metric is unfair to the institutions that are serving “nontraditional” students—the majority of students in postsecondary education today. To compare students' college or labor market success in a highly selective not-for-profit college or public flagship school to that of students in a regional public four-year campus is clearly unfair. One solution to this problem is to establish risk-adjusted metrics that would allow us to compare individual campuses with their students' characteristics taken into account.

Risk-adjusted metrics are not a new idea. For example, hospital outcomes are often compared using measures that take into account their missions and clientele. It's understood that patient populations in community hospitals vary greatly from those in,

³ See Who Wins? Who Pays? The Economic Returns and Costs of a Bachelor's Degree by Jorge Klor de Alva and Mark Schneider. Available at http://www.air.org/focus-area/education/index.cfm?fa=viewContent&content_id=1286&id=6

say, trauma centers. In higher education, we need some agreement on which student and campus characteristics need to be taken into account, perhaps starting with the risk factors that NCES has identified,⁴ but developing consensus around variables and methods requires more work. And we must take care so that risk adjustments don't let poor-performing campuses off the hook. A campus with a 25 percent graduation rate might have a "risk-adjusted graduation rate" of 35 percent, but is 35 percent good enough?

Consumer Information vs. Regulation

Let's assume that over time we develop better metrics to gauge the performance of our institutions of higher education. Then what? The U.S. Department of Education's effort to regulate based on Gainful Employment shows the risks of getting too far ahead of the quality of the data.

As is well known, a federal court ruled this past summer that the repayment ratio, one of the Department's three Gainful Employment metrics, was "capricious and arbitrary" and that no research backed up its 35% threshold for imposing penalties on campuses. While the Department's right to regulate on GE was upheld by the court, the current effort has once again hit a major stumbling block.

The problem here, I believe, is that the Department has been so focused on Gainful Employment as a *regulatory issue* that it has neglected an equally crucial role—getting the information it has collected into the hands of students and their families in an understandable format. The huge effort expended on the three regulatory ratios (debt to earnings; debt to discretionary earnings; repayment rates) meant that too little was paid to what is arguably the most important piece of information in the entire GE data release in June of 2012: the average earnings of graduates of covered programs. Indeed, I have been told that there was serious discussion about not even releasing earnings data at all!

While the Department of Education has made some moves toward making its data more consumer friendly, its Gainful Employment efforts missed opportunities to be more useful to students. For example, in its June 2012 release of the Gainful Employment data, it had a column of data labeled "debt to earnings annual rate denomina." In fact, this is the average earnings of graduates from thousands of programs throughout the nation.

These earnings data contain valuable information not conveyed by the ratios. Here, for example, are the average earnings of graduates from four of the most commonly offered programs in California covered by the GE data.

⁴ NCES has identified a series of risk-factors. These include delayed enrollment, part-time attendance, financially independent, having dependents or children, single parent, and no High School diploma. See <http://nces.ed.gov/das/epubs/showtable.asp?pubnumber=19&tablenumber=C&dir=2002168>

“Debt to earnings annual rate denomina” (aka Earnings) for Four of the Most Common Programs in California			
Program	Average	Minimum	Maximum
Cosmetology	\$11,119	\$7,141	\$16,912
Message Therapy	\$14,339	\$8,306	\$21,034
Medical Assistant	\$16,257	\$8,951	\$27,175
Licensed Practical Nurse	\$38,838	\$20,340	\$68,871

Earnings data reported in dollar terms convey information understandable by most people. Ratios don't. Indeed, the regulatory-based ratios could easily lead to poor decisions: consider that for cosmetology, the average debt to income ratio was 3.6%, lower than any of the other programs shown above, and the maximum ratio was 11.8%, below the 12% “trigger” of the GE regulations. Yet, graduates of cosmetology programs earned far less than graduates from other programs.

Unfortunately, these simple dollar figures can be hard to find. In its downloaded data set, the Department, as noted, unhelpfully labeled them “debttoearningsannualratedenomina.” And the entire Gainful Employment data base was released as a “flat file” consisting of almost 14,000 lines of data, so locating data for a program or comparing programs across institutions isn't for the faint of heart. That's why I created a far more user-friendly interface that can be found at <http://collegemeasures.org/gainfulemployment/>.

Clearly, given the amount of taxpayer money invested in our colleges and universities, the government has an interest in making sure that the money is not spent frivolously. And the rate of return on both student and taxpayer investments in higher education matters a lot. The problem is that most of the data we have now are not precise enough to let us pick firm cut-off points fairly—for example, it is difficult to justify disqualifying a school with a repayment rate below 35% from participation in Title IV programs but not a program with a 35.1% repayment rate. However, if we view these data as informing consumer choice and seek to create reliable tools to allow students, their families, and their government representatives to view these data within a comparative framework, we can increase accountability by empowering consumer choice.

I also believe that had we approached these data with a consumer information framework rather than a regulatory one, the Department might have been able to make progress resolving one of the most severe limitations on the current data: it could have expanded the coverage from just the for-profit sector to both public and not-for-profit institutions.

Reauthorization of the Higher Education Opportunity Act (HEOA)

Measurement of student success can be improved and IPEDS can and should be modernized. The reauthorization of HEOA provides such an opportunity. Some of the issues touched here may require more time to resolve and may need to be addressed outside of HEOA. (For example, some of IPEDS' value in documenting higher education finance is limited due, at least in part, to shortcomings and differences in GASB and FASB).⁵ Assessing student learning is a step too far for Congress to undertake given the current state of the science of assessment and given legitimate concerns about the scope of federal intervention.

However, we can and should improve our measurement of labor market outcomes, and Congress has the right and the obligation to ask what hundreds of millions of dollars in state longitudinal grants has bought us in terms of information that helps students, their families, and taxpayers make the right to decisions about higher education.

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⁵ Public institutions follow Governmental Accounting Standards Board (GASB) standards, and private (for-profit and non-profit) institutions follow Financial Accounting Standards Board (FASB) standards. Each Board has a distinct mission and IHEs following these different standards report data differently, creating challenges in comparability.