A BETTER HIGHER EDUCATION DATA AND INFORMATION FRAMEWORK FOR INFORMING POLICY:

The Voluntary Institutional Metrics Project

HCM STRATEGISTS

ALIGN. ADVOCATE. ADVANCE.

WHAT WE ACCOMPLISHED

Developed a breakthrough framework for data consideration in policymaking by moving to a defined set of five critical metrics that collectively provide a holistic perspective on institutional performance across postsecondary sectors.

WHAT WE ASK OF POLICYMAKERS

Learn about and support our work to develop a better framework to inform your work.

Purpose of Voluntary Institutional Metrics Project

In February 2011, a group of forward-thinking college and university presidents from a variety of sectors (two-year, four-year, graduate, public, private not-for-profit and for-profit) came together determined to find a limited but powerful set of key metrics (measurements rather than standards) that would provide a more comprehensive picture of higher education for federal and state policymakers.[1] They believed that such metrics would improve the public policy debate occurring around higher education. Demonstrating their commitment to the importance of performance measurement, these presidents not only worked together to develop a set of coherent metrics but also willingly offered their institutions as test subjects.

For the past two years, the members of this group, with support from the Bill & Melinda Gates Foundation, worked diligently to access and analyze existing data about five issues that they believe are critical to higher education:

- **Repayment and default rates on student loans**—revealing whether students who've graduated can get a job that allows them to repay their education loans;

- **Student progression and completion**—showing progress toward and completion of a certificate or degree, including critical momentum points;

- **Cost per degree**— consisting of the costs for an institution to produce a degree;

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1 While this group of presidents decided to focus on federal and state policymakers, it should be noted that they did recognize and discuss the potential interest in and use by these metrics beyond this audience. For example, it was noted that there is a great deal of interest in using student learning outcomes for institutional improvement, particularly by accreditation entities.

- **Employment outcomes for graduates**—indicating a student's ability to find employment and increase earnings after graduation; and

- **Student learning outcomes**—telling how effectively an institution delivers and assesses the learning required for a given credential and facilitates comparisons of various institutions' credential quality.

The presidents set out to demonstrate that colleges and universities could voluntarily share data about these five issues and that the issues, when considered together, would yield more coherent, sophisticated and nuanced information across the various sectors. They hoped that they could access data currently collected by federal and state governments rather than create new data collection efforts. They also hoped to capture institutional differences across the array of institutional types and missions by testing "input-adjusted" data reporting (e.g., accounting for differences in the types of student bodies served by different institutions). For example, it would be reasonable to differentiate a selective institution from an open-door institution by setting expected performance levels for a given reporting category based on the risk factors represented in the student body (e.g., Pell eligibility, part-time status).

The primary goals were to define a set of metrics that, when taken collectively, provide a more comprehensive story of students served and outcomes produced by these colleges and universities without adding substantial reporting burden for the institutions. Central to these goals was selecting metrics that:

- provided a holistic picture of each institution regardless of sector;

- could be applied across both two- and four-year degree-granting institutions;

- could be applied across institutions regardless of their different missions, student bodies and academic delivery models;

- used, whenever possible, an input-adjusted approach that considered student body characteristics;

- used, to the fullest extent possible, data already being collected, but not necessarily analyzed in the most beneficial ways, to minimize reporting burden and costs to institutions; and

- could inform and assist policymakers in decision making.

The institutions were clear that any data collected within this new approach should not increase the already extensive data reporting mandates. Their hope was, and remains, to substitute their data sets for some existing data collections that yield little or no value. They also wanted to avoid relying on either federal or state governments as the collection agency for their metrics. Rather, they wanted to create a process in which institutions could voluntarily produce and publicly report their results. Finally, the presidents sought to inform public policy but not to have the data used to establish "one size fits all" performance rates. In fact, the use

of input-adjusted data reveals the complexity involved in fair and impartial analysis of results and mitigates against the establishment of bright-line rates. New mandates and/or establishment of prescriptive rates would work against the ultimate goal of having consistent, coherent, voluntary reports across the vast array of American institutions of higher education.[2]

While much progress has been made, many challenges arose throughout the process, some of which were addressed while others still remain. This report documents where the group is after 30 months of dedicated work. The group produced initial data on four of five metrics areas; learning outcomes is the only area for which data were not produced.

Despite the excessive level of data reporting that exists, the most disappointing outcome is that data were not readily available for some metrics. That does not necessarily mean the data do not exist but means existent data are not available to the institutions. For example, hopes that data on employment success might exist in unemployment record systems proved to be futile. Only a few states consistently link unemployment data with higher education data, and even where data are linked, the unemployment data do not allow analysis at a program level.

From our work, we have essentially three distinct categories for the five metrics areas.

1. Data were publicly available and were input-adjusted.

   - Debt repayment rates and cohort default rates of student loans

2. Data were collected but required special reports and have not been input-adjusted; refinements would need to be made if there are future data collections.

   - Progression and completion
   - Cost per degree (operating expense data available but not capital expense data)

3. Limited or no data were collected and work continues.

   - Employment outcomes data (not readily available publicly or from institutions and it is especially difficult for on-line providers with students in multiple states to access these data consistently across the various state labor agencies)
   - Learning outcomes data (efforts focused on program-level data that were not readily available)

While the work was challenging, both the institutions and the foundation remain committed to this effort and believe that a limited set of key institutional performance metrics collected consistently across sectors will yield a better data framework to inform public policy. This approach offers the promise of streamlining data collection and improving policymaking.

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2   http://www.gao.gov/new.items/d10871.pdf

What is it and how is it different? A number of voluntary data collections have emerged over the past decade in reaction to the growing focus on higher education accountability. These efforts seek to go beyond existing efforts, particularly the federal Integrated Postsecondary Education Data Systems (IPEDS), to capture important elements of today's student body and emerging models of postsecondary delivery. Initiatives such as the NGA/CCA Common Completion and Progression Metrics, Access to Success, Completion by Design and Achieving the Dream target parts of the higher education process in an effort to change institutional practice. Additionally, the emerging Voluntary Framework of Accountability, the more established Voluntary System of Accountability and U-CAN provide informative snapshots of the context and performance of colleges and universities.

While acknowledging those efforts that are primarily intended for students and their families, this group of college and university presidents sought to focus on the needs and interests of policymakers. They also wanted to explore the possibility of defining a set of metrics that took into account a broad array of areas to be measured, rather than one particular area (e.g., only graduation rate or only loan default rates). At the same time, it was important to this group that such a set of metrics could be applied across all types of degree-granting institutions. They wanted to define a set of common metrics that could provide quality data across a set of institutions providing certificate, associate, baccalaureate and graduate degrees. Finally, the group determined that the audience for their work would be federal and state policymakers with an eye toward informing policy decisions first and institutional practice second. Coming together as the Voluntary Institutional Metrics Project, the presidents agreed that metrics across five specific areas represent the key issues upon which to assess a college or university: progression and completion, cost per degree, student loan default and repayment rates, employment outcomes and student learning outcomes.

Who participated? An important aspect of this work was the involvement of presidents representing the diverse institutional types and student bodies served across American higher education. The following list provides context for the institutions involved and illustrates this diversity. It was important to the presidents to identify a set of metrics that could be applied broadly across different institutional types and missions.

Table 1: List of participating colleges and universities.

PARTICIPATING COLLEGES AND UNIVERSITIES			
	Institutional Type	**Location**	**Headcount Enrollment**[3]
Alamo Colleges	2-year, public	Texas	Undergraduate: 61,507
Anne Arundel Community College	2-year, public	Maryland	Undergraduate: 17,957
Capella University	4-year, private for-profit	Minnesota, but distance learning	Undergraduate: 7,487 Graduate: 28,888
Charter Oak State College	4-year, public	Connecticut, but distance learning	Undergraduate: 2,241
DeVry University	4-year, private for-profit	Illinois, but distance learning and nationwide campuses	Undergraduate: 69,707 Graduate: 23,956
Excelsior College	4-year, private not-for-profit	New York, but distance learning	Undergraduate: 33,897 Graduate: 1,711
Ivy Tech Community College	2-year, public	Indiana	Undergraduate: 106,409
Johnson County Community College	2-year public	Kansas	Undergraduate: 21,020
Kentucky Community and Technical College System	2-year, public	Kentucky	Undergraduate: 107,890
Louisiana Community and Technical College System	2-year, public	Louisiana	Undergraduate: 74,481
Regis University	4-year, private not-for-profit	Colorado	Undergraduate: 5,643 Graduate: 5,610
Rio Salado Community College	2-year, public	Arizona	Undergraduate: 25,109
Southern New Hampshire University	4-year, private not-for-profit	New Hampshire	Undergraduate: 7,630 Graduate: 4,221
University of Maryland University College	4-year, public	Maryland	Undergraduate: 28,119 Graduate: 14,594
University of Missouri – Columbia	4-year, public	Missouri	Undergraduate: 25,992 Graduate: 7,770
Walden University	4-year, private for-profit	Minnesota, but distance learning	Undergraduate: 8,741 Graduate: 40,241
Western Governors University	4-year, private not-for-profit	Utah, but distance learning	Undergraduate: 23,654 Graduate: 7,361
Western Kentucky University	4-year, public	Kentucky	Undergraduate: 17,970 Graduate: 3,066

3   Source: IPEDS, 2011. Data represent headcount enrollment in 2011 except for part of the DeVry University data. For some DeVry University campuses in IPEDS, there were no data available for graduate students in 2011, so 2010 data were used.
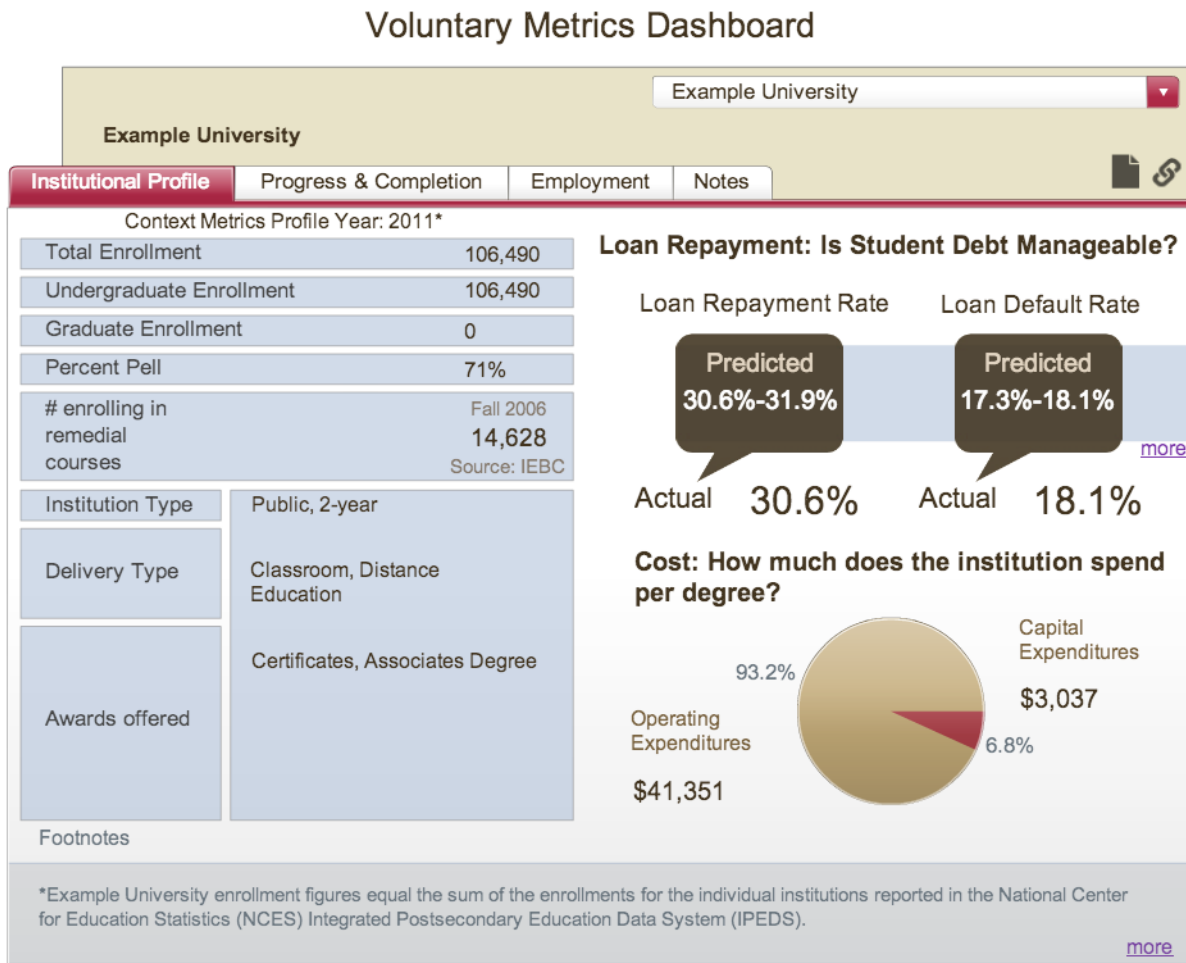
Conceptualizing the Metrics Dashboard

The group decided to use a dashboard approach, which tracks a select number of key performance indicators to guide strategic and operating decisions. Policymakers often seek data on too many variables, resulting in data overload and lack of focus. This sometimes leads to decisions based on anecdotal information. Colleges and universities face the burden of increasing data collection requirements, yet policymakers often say they do not have access to relevant information. This effort sought to reconcile those demands and bring greater efficiency and effectiveness to data collection and utilization.

A conceptual framework for the metrics dashboard is provided on the following pages. The five key metrics would be considered collectively to support balanced decision-making. Reliance on a single metric or even several metrics risks unintended consequences. For example, focusing only on progression and completion could result in lessened expectations for academic quality in order to assure students' progress, even if academic performance lags. On the other hand, a single focus on costs may come at the expense of support for completion. Viewing the whole set of metrics is necessary to gain a balanced perspective on the performance of a single institution, a set of institutions, a sector and all of higher education. These metrics, considered collectively, present a coherent picture about cost, quality, efficiency, effectiveness, student ability to finance college and student success in employment. They help determine how resources, including public investments, are used and whether credentials offer sufficient value to justify cost.
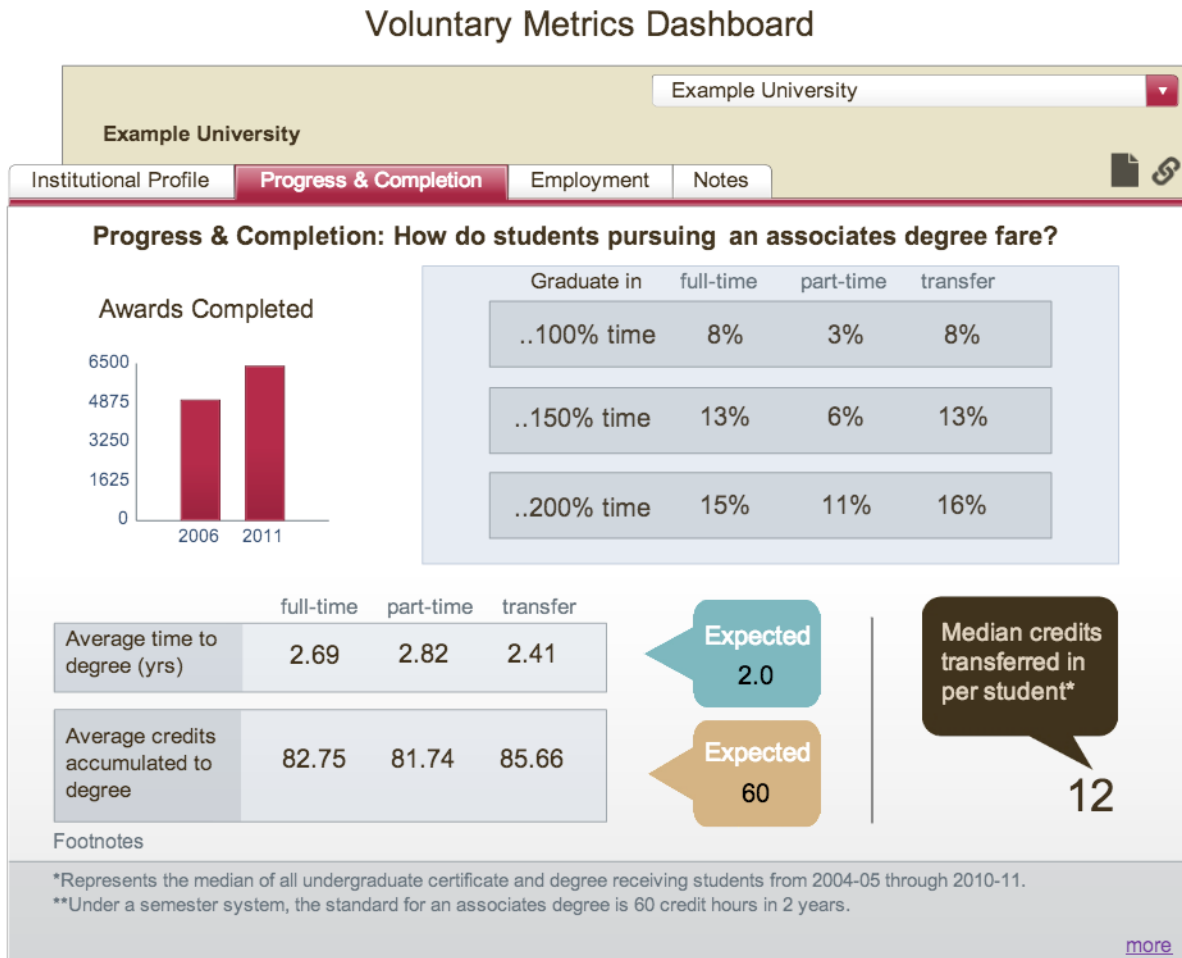
Figure 1. Mock dashboard, page one

(Note these data are not real and do not represent the participating institutions; the figure is for illustration purposes only).
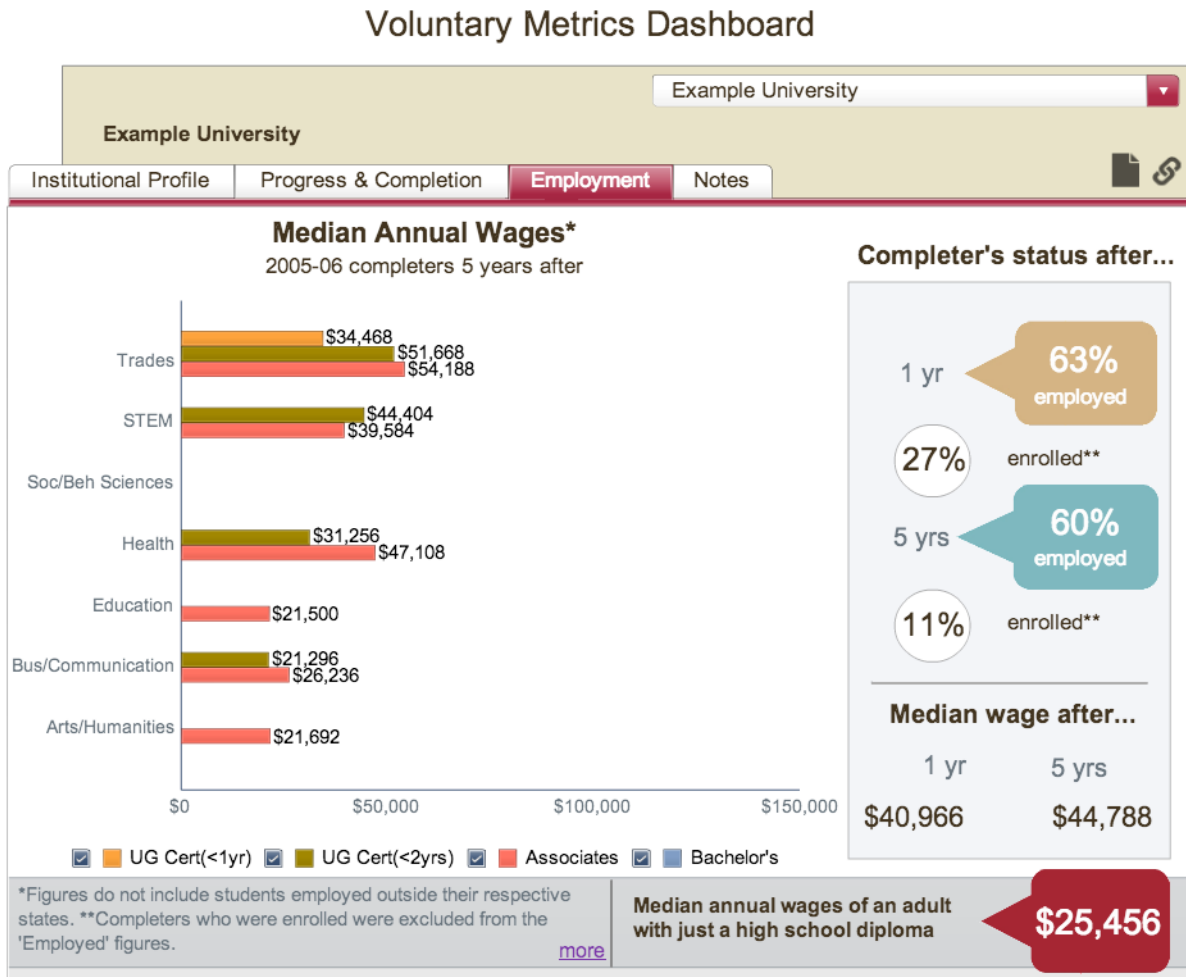

Voluntary Metrics Dashboard

Example University

Example University

| Institutional Profile | Progress & Completion | Employment | Notes |

Context Metrics Profile Year: 2011*

Total Enrollment	106,490
Undergraduate Enrollment	106,490
Graduate Enrollment	0
Percent Pell	71%
# enrolling in remedial courses	Fall 2006
	14,628
	Source: IEBC

Institution Type	Public, 2-year
Delivery Type	Classroom, Distance Education
Awards offered	Certificates, Associates Degree

Loan Repayment: Is Student Debt Manageable?

Loan Repayment Rate   Loan Default Rate

Predicted 30.6%-31.9%   Predicted 17.3%-18.1%

more

Actual **30.6%**   Actual **18.1%**

Cost: How much does the institution spend per degree?

Capital Expenditures $3,037

93.2%

Operating Expenditures $41,351

6.8%

Footnotes

*Example University enrollment figures equal the sum of the enrollments for the individual institutions reported in the National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS).

more

Figure 2. Mock dashboard, page two

(Note these data are not real and do not represent the participating institutions; the figure is for illustration purposes only).

Voluntary Metrics Dashboard

Example University

Example University ▾

Example University

Institutional Profile	**Progress & Completion**	Employment	Notes

Progress & Completion: How do students pursuing an associates degree fare?

Awards Completed

	Graduate in	full-time	part-time	transfer
	..100% time	8%	3%	8%
	..150% time	13%	6%	13%
	..200% time	15%	11%	16%

Awards Completed chart — y-axis: 6500, 4875, 3250, 1625, 0; x-axis: 2006, 2011

	full-time	part-time	transfer
Average time to degree (yrs)	2.69	2.82	2.41
Average credits accumulated to degree	82.75	81.74	85.66

◀ **Expected 2.0**

Expected 60

Median credits transferred in per student*

12

Footnotes

*Represents the median of all undergraduate certificate and degree receiving students from 2004-05 through 2010-11.
**Under a semester system, the standard for an associates degree is 60 credit hours in 2 years.

more

Figure 3. Mock dashboard, page three

(Note these data are not real and do not represent the participating institutions; the figure is for illustration purposes only).

Voluntary Metrics Dashboard

| Example University ▼ |

Example University

| Institutional Profile | Progress & Completion | **Employment** | Notes |

Median Annual Wages*
2005-06 completers 5 years after

Category	Wages
Trades	$34,468 / $51,668 / $54,188
STEM	$44,404 / $39,584
Soc/Beh Sciences	
Health	$31,256 / $47,108
Education	$21,500
Bus/Communication	$21,296 / $26,236
Arts/Humanities	$21,692

$0 $50,000 $100,000 $150,000

☑ ▮ UG Cert(<1yr) ☑ ▮ UG Cert(<2yrs) ☑ ▮ Associates ☑ ▮ Bachelor's

Completer's status after...

1 yr — **63%** employed

27% enrolled**

5 yrs — **60%** employed

11% enrolled**

Median wage after...

1 yr	5 yrs
$40,966	$44,788

*Figures do not include students employed outside their respective states. **Completers who were enrolled were excluded from the 'Employed' figures.   more

Median annual wages of an adult with just a high school diploma — **$25,456**

Process of Getting to Final Metrics

During the initial phase of the initiative, the group selected five metrics for further consideration, and the foundation invited national experts on the five issues to prepare papers proposing how data might be accessed and the metrics might be represented.

- **Progression and completion**—*Improving Graduation Metrics for Postsecondary Education*, by Thomas Bailey, Teachers College, Columbia University;

- **Cost per degree**—*Developing metrics meeting, recommendations on cost measures*, by Jane Wellman and Donna Desrochers, Delta Cost Project;

- **Repayment of student loans and default on loan payments**—*Gainful Employment Is Coming to a College or University Near You*, by Mark Schneider, American Institute for Research;

- **Employment outcomes**—*Using Gainful Employment Metrics to Encourage Completion, Justify Cost, Judge Program Effectiveness, and Encourage Institutions to Serve Low-Income Young Adults*, by Anthony Carnevale, Center for Education and the Workforce, Georgetown University; and

- **Learning outcomes**—*Outline of Student Learning Outcomes*, by Sara Goldrick-Rab, University of Wisconsin.

The experts joined the institutional presidents at a February 2011 meeting in Washington, D.C., at which it was agreed to pursue development of the five metrics. The institutions developed working teams for the employment and learning outcomes metrics. The group initiated data collection for the three other metrics: progression and completion, cost per degree and student loan repayment and default. During the past two years, the institutions took part in a number of meetings and phone calls, contributing time and resources from their staffs to further refine the data collection.

Progress on Final Metrics

Over the past two years, progress occurred across all of the metrics, but additional work is required to finalize the framework. As previously noted, data unavailability hampered efforts on employment and student learning outcomes. The following descriptions provide the work to date, challenges, gaps and next steps.

1. Data were publicly available and were input-adjusted.

Debt Repayment Rates and Cohort Default Rates of Student Loans

Importance. Policymakers are already looking at whether an institution's students repay their student loan debts, using it as a proxy measure of institutional quality by determining a student's employability at the end of the postsecondary experience. The Department of Education issues annual reports disclosing institutional three-year cohort default rates and has released data in the past for school-wide repayment rates. However, these current requirements are not enough, because they do not account for differences in institutions and student body composition. It is misleading to compare institutions that have only a few students at risk of not paying back their loans against schools enrolling large numbers of students who present risks. This limitation can be overcome by adjusting for student and institutional characteristics, such as selectivity, percentage of students receiving Pell Grants or taking out loans, racial composition, age composition and institution location.

Background. The model developed in this pilot applies an algorithm to publicly available data (IPEDS) in order to predict a range within which an institution's repayment and default rates should fall. The variables that drive the calculation include the proportion of students eligible for Pell Grants; percentage of other students who have specific Department of Education-developed risk characteristics; percentage of students receiving federal loans; and age, gender and racial composition of the student body. Once the predicted range is identified, it is compared with the actual experience of the institution as reported in the Department of Education's Cohort Default Rate report. Each institution falls within, above or below the predicted range. Obviously, institutions seek to exceed their predicted range for loan repayment and to come in at a lower-than-predicted default rate.

Why this approach is an improvement. Adjusting school-wide repayment rates and cohort default rates for the type of student served is a clear improvement over the use of raw rates. Input-adjusted rates allow policymakers to understand the nature of an institution's mission and students and how well the institution is performing against its predicted performance level.

Lessons learned. The model produces a more informed, nuanced set of information about repayment and default rates within the context of the audience served. This model can serve as a base for other data collection and provides information to reviewers of the four other metrics in this pilot set.

Gaps. This metric is based on solid, publicly available data for cohort default rates. The Department of Education released school-wide repayment rates, and those data were used for the pilot. However, the Department does not appear to have plans to publicly release school-wide repayment rates on an annual basis. It would be helpful to have those data released annually.

Next steps. The input-adjusted model seems to perform well and should be considered for the four other metric areas in this project.

2. Data were collected but required special reports and have not been input-adjusted.

Progression and Completion

Importance. Policymakers at both the federal and state levels consider college completion an important priority. However, data that the federal government uses to calculate graduation rates are significantly incomplete. They currently measure only first-time, full-time students.

Background. The group agreed to use the context, progression and completion metrics developed by Complete College America (CCA) and the National Governors Association (NGA) as the starting point to define this metric.

The data elements collected, as identified by CCA/NGA, are[4]:

- enrollment of part-time, full-time and transfer students (metric used for context);

- enrollment and completion in remedial English and math courses and subsequent completion of college-level coursework;

- success in gateway (first-year) college courses;

- total credits attempted and completed;

- persistence and graduation rates for cohorts of part-time, full-time and transfer students;

- degree production for bachelor's and associate degrees, as well as certificates for programs lasting one year or longer;

- degree production for master's degrees (this element was added by the presidents); and

- average time to and credits accumulated toward a degree.

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4   For technical definitions of these metrics visit http://www.completecollege.org/docs/CCA%20Metrics%20 Technical%20Guide%202011-12.pdf

Why this approach is an improvement. The efforts of CCA/NGA have been important to the field by calling attention to progression and completion. CCA collects data only for public institutions, so this effort attempted to expand that collection to also include private not-for-profit and for-profit institutions. At a time when only one-quarter of all students are traditional-age, first-time, full-time attending residential campuses, it is vital to use data that accurately describe most students. **In an attempt to better capture the number of students enrolled at community colleges as well as online providers (including online students and spring semester starters), each of the student cohorts (part-time, full-time and transfer) included students who enroll anytime during the academic year, not just in the fall.** The goal was to capture students who enroll in the spring and to account for a growing delivery system that allows multiple entry points in any semester. This approach addresses issues related to multiple starts used primarily by online institutions. It is also important that success be measured not only by a completion or graduation rate but also by how students are progressing through their degree requirements toward their ultimate goal (i.e., transfer, certificate or degree).

Lessons learned. The recent focus on program completion is appropriate. However, an exclusive focus on completion risks negative impact on academic standards and other unintended consequences. This is but one example why policymakers should consider a series of metrics, rather than individual rates (e.g., graduation rates).

The burden on some institutions was substantial. When looking at completion at 200 percent of intended time, the institution must report on eight years of student records, sometimes totaling millions of records. Additionally, eight years is a long time and may have involved changes in records systems and processes, complicating the reporting. Finally, some institutions encountered changing FERPA regulations that further complicated their reporting.

Gaps. There is a gap in the data about students who transfer from institutions, particularly when they move to another state. These data are not readily available at the institution level, though sometimes they are available at the state level. This project did not collect data on non-degree-seeking students, or students who pursued certificates of less than one year, who may make up a portion of the community college population. Serving such students is a part of their mission. It would be worth exploring how to measure success with these students.

Next steps. A subgroup of institutions should meet to discuss how to create more readily accessible data around transfers, particularly on ways that community colleges can readily access information from either their home and surrounding states or the National Student Clearinghouse on "transfers out" of their colleges into a four-year university. This is a central part of the community college mission and a growing student behavior pattern regardless of institutional type or sector. Additionally, the field would benefit from further work to

more accurately define certificates and successful workforce development programs at postsecondary institutions. This work should involve at minimum representatives from the institutions, workforce development and business and industry, and it should focus on which certificates have economic value.

Cost Per Degree

Importance. As resources continue to be constrained, policymakers increasingly are calling for greater efficiency and effectiveness at colleges and universities. This typically takes the form of a cost-per-degree metric followed by a comparison or ranking of institutions. However, current methodologies do not take into account all institutional costs (particularly those related to capital expenditures adjusted for mission, delivery structure and student body served). Such exclusions result in potentially uneven comparisons across institutions and sectors.

Background. In an early phase of the project, the group considered work produced through the Delta Cost Project on Postsecondary Education Costs.[5] Discussion centered on using the Delta Cost calculations as a base (cost per degree[6]). The presidents decided that the Delta Cost data provided a reasonable view of operating costs per degree, but defining and adding capital expenses into the calculation could improve it. The approach was to determine and test the feasibility of finding a capital expense element that could be assessed across the institutional sectors. After the group assessed the alternatives, Replacement Cost Value (RCV) was selected as the most viable method. RCV is the standard metric used to identify the amount an entity would have to pay to replace an asset at the present time.

Why this approach is an improvement. Currently available metrics for cost per degree exclude capital expense data, and this exclusion is seen as a weakness. Over the course of the project, it became obvious that different types of institutions and delivery models have significantly different cost levels and structures, making it important to consider both operating and capital costs to determine the real cost of degrees and of institutions. The goal was to find a way to standardize capital expenses so that when viewed with operational expenses they would provide a more comprehensive picture of institutional costs.

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5   Using the Delta Cost methodology, Nate Johnson, senior consultant for HCM Strategists, calculated the cost per degree for the participating institutions and submitted a report titled "Weighted and Unweighted Estimates of Expenditures per Credential Awarded."

6   "Degree" is defined as all degrees and certificates that a college or university reported in IPEDS.

Lessons learned. Over the course of this project, the participants came up with a method of calculating capital expenses based on Replacement Cost Value. RCV is a viable method given the ease of calculation and minimal burden for some institutions that already have the data for insurance purposes. RCV also provides current market value for assets and establishes a point for comparison. Institutions that do not currently calculate RCV can rely on certain methods to derive the market value of capital assets.

- The current market value of buildings and other real estate can be identified through an analysis of the commercial mortgage-backed securities (CMBS) market.

- Debt instruments are priced based on the size, property type and location of a commercial real estate asset.

- The current market value of all asset types can also be obtained through appraisals.

- Appraisals can be costly and time-intensive depending on the type and number of assets requiring assessment.

Gaps. One of the challenges with capital expenditure is agreeing on what costs to include. For example, should athletic expenditures be included? Dormitories? Research labs? Agricultural research facilities? It can be argued that all capital expenditures contribute to the attractiveness of a particular institution and its brand. As this work continues to be refined, it provides an opportunity for policymakers and institutional leaders to have better-informed and more robust discussions around the various types of college and university missions, how these missions are funded and how such funding mechanisms and revenue streams ultimately impact costs for students and families.

While RCV shows great promise, there are also challenges that need to be addressed across three primary areas: depreciation, inter-institutional variations and quantification.

Depreciation. Because of a lack of standards, institutions use various methodologies for depreciating similar assets, thus making it difficult to effectively conduct comparative studies. Differences in the environment, application and quality of a capital asset account for variance in the calculation of useful life. Building depreciation among institutions surveyed ranged from 22 to 45 years, hardware and software depreciation ranged from 3 to 10 years and other depreciation calculations ranged from 3 to 17 years.

Inter-institutional Variations. Without standardized assumptions and methodologies for assessing the value of assets, replacement costs for the same asset may vary significantly across institutions. Additional guidance will be required to delineate which capital assets should be included and how to calculate their useful life. For example, three of the 10 institutions that were surveyed indicated that they calculate and maintain hardware and software replacement costs as a single value.

Quantification. While insurance records may identify replacement cost values for facility assets, most non-facility assets are self-insured and therefore recorded only as historical cost. The system offices that were surveyed indicated that RCV for the assets of each participating institution were not available at an aggregate level. Some institutions may not capitalize assets but rather expense them on a cash basis.

Next steps. The RCV method provides a foundation for understanding capital expenses across the institutions, but improvements, such as those identified below, need to be made to realize its full potential.

- Differences in the treatment of capital expenses across the institutions should be normalized to improve the metric.

- Hands-on collaboration from the institutions' financial managers is required to improve the metric and should focus on the following goals:
    - standardizing the definition of capital assets by type (e.g., buildings, hardware, software) across institution types;
    - standardizing the range of useful life for similar capital assets;
    - tracking of capital-asset usage by major (e.g., English, biology, engineering) and degree type (e.g., bachelor's, master's, doctoral); and
    - standardized weighting of majors and degree types across institutions.

- This standardization should result in more specific guidance on the components of the calculation (e.g., what is allowable in each category, what are allowable useful life durations).

- After refining guidance, the capital expenses metric should be integrated with prior work on operating expenses to provide a comprehensive metric of cost per degree across institution types.

3. Limited or no data were collected and work continues.

Employment Outcomes

Importance. Policymakers increasingly are calling for more information on the return on investment of a postsecondary credential, specifically in the area of employment outcomes. They want to know the extent to which the state retains college graduates and the associated economic returns, the degree to which colleges are meeting employment needs in high-demand fields (e.g., health, education, STEM) and whether higher levels of educational attainment increase employment and wage prospects.

Background. In an early phase of the project, the group consulted with Tony Carnevale, director of the Georgetown University Center on Education and the Workforce. His work informed a framework of connecting postsecondary and state unemployment insurance (UI) data and the information that can result from those linkages. The approach centered on:

- status of employment in the state one and five years after completion (e.g., employed or not employed);

- subsequent enrollment in postsecondary education after completion;

- wage earnings one and five years after completion; and

- industry of employment one and five years after completion.

For four institutions (Capella, Excelsior, Western Governors and DeVry) primarily providing online educational delivery, the approach was to match to UI data in three states: the state in which their primary operation was located, plus Texas and Georgia. Those states were selected because they contain high concentrations of students enrolled in the four institutions. Unfortunately, Texas was the only state in which data could be matched for these institutions in the timeframe of the work.

Challenges with the metric. While there are pockets of states and institutions connecting postsecondary and UI data, such activity is not widespread, consistent or well documented. Additionally, there still is no standardized approach for reporting employment outcomes, even though there has been increased attention to the matter over the past decade. The goal was to develop a set of employment outcomes metrics that result from linking postsecondary and state UI data applied consistently across a number of states and standardizing the process so that it could be replicated with other institutions and systems. It should be noted that it was particularly difficult for on-line providers with students in multiple states to access these data consistently across states.

Lessons learned. The project demonstrated that connecting postsecondary data to UI data currently is the best available way to determine a few key employment outcomes of college graduates, but it still has significant challenges. Challenges to this project were working with states to link institutional data beyond the public sector and demonstrating that data could be linked across state lines.

Significant gaps. Not all institutions can link to their states' UI wage record data. In some states the practice and process is longstanding and occurs at regular intervals, while in others the practice is virtually nonexistent or prohibited by statute. Additionally, a significant gap exists in the ability to match program-level data of a degree to specific occupational codes. In other words, it is difficult to assess placement into an occupation within a student's field of academic study given the current data collection processes and

structures. The ability to get at state-level data was problematic for the distance education-based institutions that face dealing with 50 states. And some institutions raised questions about whether state data on employment are a direct enough link to institutional quality to be helpful in higher education policy development and in determining whether the employment was a result of institutional action or in a field related to their degree. For example, some of the institutions involved serve adults already employed in their field of practice at the point of earning a degree, a factor that may confound the interpretation of the data. Finally, state data do not include some categories of employment (e.g., government workers, military personnel) and are limited to those students who get a degree and find employment in a single state.

Next steps. Given the unevenness and inconsistency across states in regard to access to state UI data systems, a centralized, national clearinghouse of such data, not tied to any federal or state government entity or association, may provide a potential solution. Since such a solution may take considerable time to advance, a toolkit with best practices on data-sharing agreements along with directed facilitation to state workforce entities may increase the ability for colleges and universities to access the existing employment databases in the interim. Additional work would be advanced to match program-level data of a degree to specific occupational codes that could be broadly shared and used. As improvements are made, the use of success rates on national professional qualifying and licensure examinations also may be an intermediary step that provides useful information in this area.

Learning Outcomes

Importance. Another important measure is the extent to which an institution's students are learning, both at the core skills (e.g., communication, critical thinking and quantitative analysis) and program levels. In particular, these measures have a wide variety of uses beyond informing federal and state policymakers (e.g., institutional improvement, accreditation).

Background. Consistent with the overall use of a set of multiple metrics to be considered in total, the approach to learning outcomes was to use multiple measures in order to get a comprehensive representation of learning and avoid reliance on a single measure. The hope was to use four levels of assessments:

- core skills, such as critical thinking, using such instruments as the Collegiate Assessment of Academic Proficiency (CAAP), Collegiate Learning Assessment (CLA) or ETS Proficiency Profile;

- selected student self-reporting on the National Survey of Student Engagement (NSSE) and Community College Survey of Student Engagement (CCSSE);

- success rates on selected national professional qualifying examinations; and

- measures of program-level learning.

Lessons learned. While it is recognized that learning outcomes are critically important to address quality and effectiveness issues, the group was unable to produce data for this pilot. The original plan was to collect data on student self-reported learning (NSSE and CCSSE), core skills (CLA, CAAP and Proficiency Profile), pass rates on select national qualifying exams (e.g., nursing, teaching, engineering) and program-specific outcomes. Once it was recognized that data collection for some of the other metrics was having greater impact on the institutions, and that collection of all these data would add to the impact, the presidents decided to focus only on program-level measures. This was based on the fact that there was an obvious gap with program-level assessments and instruments. It is important to note that pilot institutions were willing to engage in the use of program-level learning outcomes assessment instruments. However, the plan to look at program-level learning outcomes was ultimately eliminated because the current state of this type of assessment is limited and would drive both cost and effort into the institutions. Furthermore, the limited options could have resulted in the appearance that the pilot was endorsing the use of a single instrument to assess learning outcomes. A more effective approach may be to use an array of instruments and/or approaches to adequately assess program-level learning outcomes. There is a need to address the gap and the limited options available for assessing program-level learning outcomes.

Given the current state of learning-outcomes assessment that allows for inter-institutional comparison, there is a risk that relying only on core skills to compare institutions may imply that the core skills (e.g., communication, critical thinking and quantitative analysis) are the only desired outcomes for higher education. That may be acceptable for associate degrees and General Education requirements but not for bachelor's or graduate degrees. However, there appears to be resistance to developing common target learning outcomes at the major or discipline level. Instead, there is an emphasis by institutions on differentiation of learning outcomes by institution. Where this breaks down is that the person on the street most likely assumes that a degree in mechanical engineering or public administration represents some common learning outcomes no matter where the degree is offered. And much of the differentiation appears to be about process (e.g., faculty credentials, curriculum, how the degree is obtained, different courses of study) rather than learning outcomes. There is unlikely to be real progress in developing reliable instruments that allow comparison until there is agreement about some commonly shared discipline-specific learning outcomes. It is difficult to measure something unless there is agreement on what is being measured and why.

The original plan to consider a multiple set of measures would be the preferred approach. This approach avoids the apparent reliance on a single measurement to represent the totality of learning outcomes. Ideally, an effective and complete data set should include measurement of both core skills and program-level learning outcomes.

Significant gaps. There is a gap in the consistent utilization of core skills instruments as well as consistent definition of cohorts, sampling, timing and frequency of instrument use. There is a significant gap in the definition of desired learning outcomes at program levels and instruments to assess and allow comparison of learning at the program level.

Next steps. Future pilot efforts should include the reporting of learning outcomes data that exists, even though those data may be incomplete. This is important to emphasize the balance necessary for the set of five metrics to work effectively.

Beyond that, the time has come to get serious about measuring learning outcomes at the core skill areas and program (major/discipline) levels.

- Agreement must be developed about common discipline-level learning outcomes for high-demand degree programs and how to present those outcomes to allow for inter-institutional comparison.

- The community continues to rely on a variety of proxies to make conclusions about academic quality. While the challenges of getting at comparative assessments of learning outcomes at the core skill areas and program levels are daunting, learning can and should be measured. And in the eyes of the public, higher education is simply not doing its job by citing the challenges without at least making valid attempts to overcome them. The community can and should base decisions about higher education and its institutions on measures that include actual learning outcomes at both core skills and program levels.

Final Statement and Recommendations to Advance the Conceptual Framework

This work resulted in a good framework for data consideration, moving from an emphasis on quantity of data and data types to a defined set of five comparative metrics that, when considered collectively, provide a holistic perspective on how well individual institutions or groups of institutions are performing. This framework can address both policymakers' concerns about lack of good, clear data to inform debate and decision-making and institutional concerns about the growing burden of data collection for institutional improvement purposes.

This framework allows policymakers to focus on, and institutions to produce, data about a limited number of key performance indicators that yield more holistic, descriptive and comparative information while at the same time eliminating data collections that are dated and duplicative. The framework is based on viable metrics, though the metrics can and should be improved by the use of input-adjusted data to help address differences in mission and students served. Additionally, there are gaps in available data. To address these challenges, this group advances the following recommendations.

Action recommendations:

- *More fully develop the learning outcomes and employment outcomes metrics.* There is a clear need for a focused effort to overcome the lack of comparative assessments of learning outcomes at the program (major/discipline) level. When joined with existing assessments of learning at the core skills level, such assessments would provide a basis for the use of learning outcomes to inform policy decision-making. Additionally, the ability of institutions to connect their data to state UI record systems (both within and outside their home state) is inconsistent across the states and uneven by institutional type. Such data would provide a good base of information but remain inadequate in answering questions about program to occupational matches.

- *Refine the cost and progression and completion metrics, using an input-adjusted approach if possible.* The methodology developed for loan repayment and default is input-adjusted, and as such offers promise for other metrics, including progression, completion and cost per degree. The model predicts a range for loan repayment by considering certain inputs (e.g., the type of students at an institution) that could include the proportion of Pell-eligible students or the number of students who present risk factors as identified by the Department of Education (e.g., older, part-time or working full-time). The institution's actual performance is then compared with the predicted range to see whether the institution fell above, below or within the range.

- *Address gaps in available data to fully develop the five proposed metrics.* For example, cost comparisons must include not only operating costs but also capital expenditures. There is neither a prevailing approach by which to calculate capital expenditures nor commonly available data. Replacement Cost Value is a promising approach, which this group recommends. However, these data currently are not calculated or collected by all institutions, and the definition of the types of capital expenditures needs further discussion and refinement. A broader sample of institutions could help address these concerns as well as affirm the approach. Additional work also needs to be done to incorporate certificates of less than a year as well as transfer outcomes to fully address the mission of community colleges.

- ***Engage with policymakers and their staffs to inform them about our work and seek their support.*** The group feels compelled to begin informing policymakers of the progress and future direction. Specifically, the presidents want to recommend that policymakers adopt this new data-driven policymaking approach. They want to demonstrate their commitment to such performance measurement, and they hope to generate support for continued efforts by engaging with policymakers early in the process.

Policy recommendations:

- ***Increase access to data for all institutions.*** The field would benefit greatly from a centralized, national clearinghouse of such data, not tied to any federal or state government entity or association. The existing National Student Clearinghouse could serve as a model or could be expanded to fulfill this role. Regardless, institutions of higher education and policymakers should lead the development of the clearinghouse to ensure that such a system decreases the burden of data collection and reporting. This clearinghouse should have a standing, secure link to federal and state databases (e.g., the Social Security Administration database, Bureau of Labor Statistics data) to provide information to institutions regarding transfers, mobile students and employment outcomes. Ensuring the safety of student privacy and data protection would be paramount in any such effort.

- ***Reduce institutional burden.*** The creation of a new framework will require a lead group of institutions to further develop the five metrics in order to address the ongoing burden of data production and reporting. This will require not only the development of new data for the key performance indicators but also the reduction or elimination of data collection that is unnecessary, duplicative or unused (e.g., federal Academic Libraries survey, Human Resources survey). It will also require the rationalization of existing data collection at the state and federal levels to reduce overall collection efforts and assure usage of common data across governmental units. Finally, Congress should remove statutory barriers that prevent the federal Department of Education from tapping into its own administrative data systems and making better use of data already collected and warehoused there. For example, the department could make small changes to the National Student Loan Data System (NSLDS) that would allow it to use that system to better track and report on the progress and success of federal grant aid recipients. However, restrictions on how NSLDS data can be used prevent the department from using that information source. Thus, when new calls for data occur—for example, a Pell Grant recipient graduation rate—pressure mounts to add it to IPEDS, which increases reporting burdens on the institutions.

Overall, this effort demonstrated that collection of data on a limited number of key metrics across a variety of institution types is feasible. Additionally, many of the data currently exist—in a variety of places—to develop metrics that more accurately define institutional outcomes. However, because these data must be pulled from a variety of locations and sources, both internally and externally, the burden to collect this information varied among the participating institutions. The group also realized that even the adjustments and improvements made to the metrics identified in this project did not go as far as some hoped to distinguish among institutional missions that result in serving different student populations. There is continued room for improvement in this area by adding or further refining input adjustments (e.g., control for differences among institutions). While this cannot be done for every variable, applying an input-adjusted approach for one or more of the variables provides a filter for consideration of the other metrics. The work conducted by the group over the past two years represents a significant step forward in support of better-informed and better-focused policy development and provides a clear and practical roadmap for future work.

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