Toward Improved Measurement of Student Persistence and Completion

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Introduction

Last year, nearly 70,000 students earned an undergraduate credential at a college or university that, according to the U.S. Department of Education, had a zero percent graduation rate. Another 2.6 million students were new enrollees in fall 2014, but regardless of whether they ever complete the certificate or degree they are hoping to earn, won't be counted in the graduation rate their college reports to the U.S. Department of Education (ED).

Since its introduction by the federal government in 1998,[1] hundreds of thousands of students have slipped through the cracks of the metric that describes the most fundamental outcome of college attendance: graduation. Far from being an oversight, the decision to not include the persistence and completion outcomes of specific types of learners in reporting and calculating graduation rates is actually built into federal legislation.

These learners share one common characteristic: They were not considered *full-time, first-time beginning students* when arriving on campus. Some, enrolling for the very first time, chose to begin their studies part-time as they balanced dreams of completing a college degree with busy personal lives, rich with commitments to family and community. Others were working adults returning to college after a long absence, ready to earn a credential that would pave their way to a better career and a brighter future. Still others were recent high school graduates, "traditional" in every way, except they began their postsecondary education at one institution and chose to transfer to another.

Valid measures of institutional performance have never been more important, for both students and the colleges that serve them. A postsecondary credential is one of the most consequential financial investments many learners will ever make. In an environment characterized by rising out-of-pocket college prices and uncertain employment and wage prospects, having accurate information about where that investment is most likely to result in earning a certificate or degree is critical. For colleges and universities, performance measures have found their way into consumer information tools, such as ED's new College Scorecard, and are increasingly important to their bottom-line. In a growing number of states, portions of institutions' budget allocations are tied to persistence or completion targets, making valid measures of both an absolute institutional priority.

Incremental improvements in measuring institutional performance are already underway, spurred by action from ED and the higher education advocacy community, and federal legislators will soon have the opportunity to make a more substantive fix. Reauthorization of the Higher Education Act in the coming Congress will provide a forum for creative thinking about new and better ways to measure student success, and improved measures of persistence and completion are likely to be among the topics under consideration.

[1] Fuller, C. (2011). *The History and Origins of Survey Items for the Integrated Postsecondary Education Data System* (NPEC 2012-833). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

As they dig into their work, policymakers will find there is no shortage of ideas for how persistence and completion reporting might be improved. Pointing out shortcomings in the ED measures of institutional graduation rates—which are calculated using data collected by the National Center for Education Statistics (NCES) as part of the Integrated Postsecondary Education Data System (IPEDS)—is nothing new. In 2010, NCES released a National Postsecondary Education Cooperative Report that contained a variety of suggestions for how IPEDS Graduation Rate Survey (GR) reporting might be improved, though it left the metric itself unchanged.[2] Work led by stakeholders in the higher education policy community, such as the Student Achievement Measure (SAM) and their "Count All Students" campaign, has gone farther, offering alternatives to existing measures and expanding the number of students to which it can be applied. And important new examples come from NCES itself, which has recently fielded the first version of a new IPEDS component, the Outcomes Measure Survey (OM), designed to capture basic persistence and completion statistics for many of the students the GR currently ignores.

What policymakers lack, however, are data that allow them to compare *between* these measures and the principles that guide them. As a result, decisions about this most consequential of measures could well be made based on intuition and instinct, not evidence.

To meet this need, American Institutes for Research (AIR) partnered with 11 colleges and universities to use institutionally-held data to contrast persistence and completion rates calculated using three distinctly different methodologies, including those used by the IPEDS Graduation Rate Survey, IPEDS Outcome Measures Survey, and SAM. Our results demonstrate how well each method represents the totality of an institution's incoming cohort of students, as well as those students' persistence and completion outcomes.

As we did so, we also tested three general principles for the *inclusive measurement of student outcomes* (IMSO) that are designed to generate maximum information for students, institutional leaders, and policymakers: (1) include all entering students, without restriction; (2) include the outcomes those students achieve at all known institutions; and (3) collect yearly measures of student outcomes, measured from the perspective of the student, and report those measures annually. The former two principles figure heavily in the Bill & Melinda Gates Foundation's recent *Answering the Call*, which articulated a set of metrics designed to support institutional performance measurement in an era of the "post-traditional" student.[3]

We begin our discussion with a review of graduation rate reporting in the status quo, and why we believe it no longer provides a firm foundation for consumer information, policymaking, or institutional accountability.

[2] National Postsecondary Education Cooperative. (2010). *Suggestions for Improving the IPEDS Graduation Rate Survey Data Collection and Reporting* (NPEC 2010–832). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

[3] Engel, J. (2015). *Answering the Call: Institutions and States Lead the Way Toward Better Measures of Postsecondary Performance*. Seattle, WA: Bill & Melinda Gates Foundation.

The Imperative to Adapt Persistence and Completion Metrics

Today's IPEDS graduation rate (GR) has its roots in the Student Right-to-Know and Campus Security Act of 1990. In the years that have followed, it has been refined through subsequent reauthorizations of the Higher Education Act of 1965, regulation, and guidance. One constant has been the narrowly tailored student cohort on which GR focuses.

To be included in the cohort of students for which graduation rates are calculated, a student must meet the following three conditions: (1) first-time enrollment, having never before enrolled in any postsecondary institution after finishing their high-school requirements; (2) full-time attendance, according to financial aid definitions; and (3) enrollment in a program leading to the award of a degree or certificate.[4] When the Student Right-to-Know and Campus Security Act was created, the restriction on which students would be represented in the graduation rate was justified as the only way to meaningfully compare across institutions.[5]

> "Our concern is that this is very important data and it needs to be comparable," said Richard F. Rosser, president of the 800-member National Association of Independent Colleges and Universities.
>
> Terry Hartle, vice president for governmental relations at the American Council on Education, added, "Colleges are pursuing a variety of approaches to graduation rates, none of which do students any good because they won't be able to compare."
>
> Seeking Data to Find Rate of Graduates, *The New York Times*, July 21, 1993

Today however, the IPEDS graduation rate methodology is older than the typical student graduating with a bachelor's degree. It comes as no surprise, then, that it is increasingly less well adapted today's college students. The share of students excluded from GR hovers around 50 percent, and has increased in nine out of the 10 most recent years of available data (see Figure 1).[6] Many of today's most discussed postsecondary policy initiatives—particularly those that open more flexible pathways to skill development and degree completion—simultaneously increase student opportunity as they exacerbate measurement problems caused by a system that focuses on first-time, full-time attendance.

The relevance of IPEDS GR is being eroded by more than just declining coverage of today's enrollees. The actual information value of the resulting metrics would seem to be in decline. As we describe in more detail later, current and planned surveys do not provide a mechanism for reporting detailed student outcomes after transfer. In addition, rather than reporting outcomes by familiar units of time, such as the number of years (or months) elapsed since a student first enrolled, graduation rates are calculated relative to institutional calendaring systems at 100, 150,

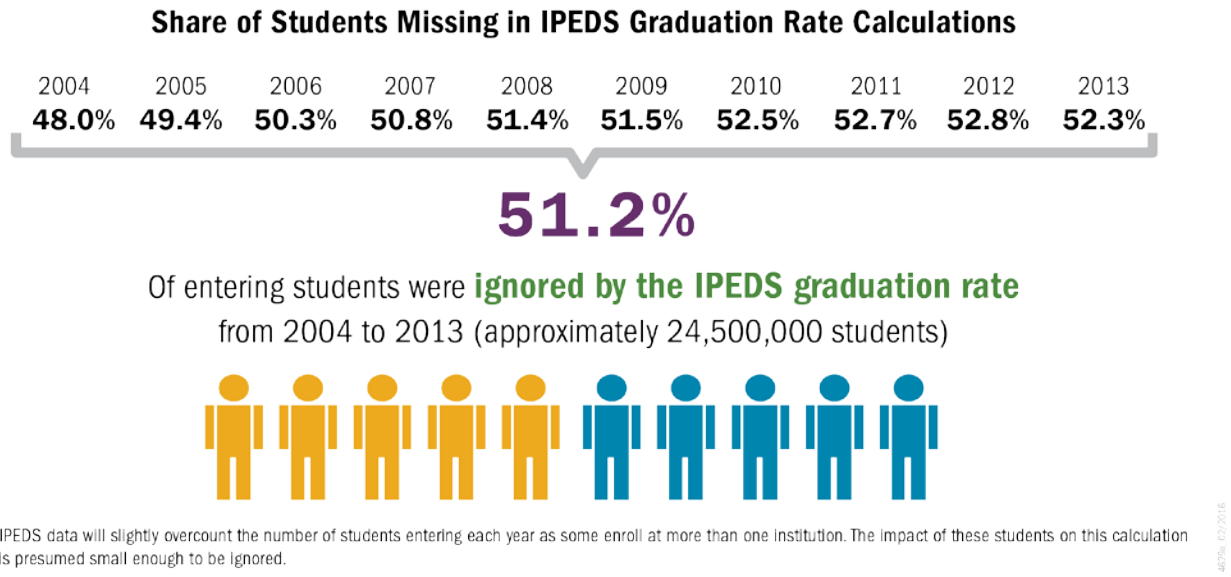
[4] Graduation rates. (2015). In *IPEDS 2015-16 Data Collection System Survey Materials: Glossary*. Retrieved from https://surveys.nces.ed.gov/ipeds/VisGlossaryAll.aspx

[5] Celis, W. (1993, July 21). Seeking data to find rate of graduates. *The New York Times.* Retrieved from http://www.nytimes.com/1993/07/21/education/seeking-data-to-find-rate-of-graduates.html

[6] Author calculations using IPEDS data for all Title IV–participating institutions from 2004–13; National Center for Education Statistics.

and 200 percent of "normal time to degree." The former issue complicates making the value proposition for institutions, like community colleges, with substantial transfer missions. The latter is of little use to consumers who want to know just how much time they will spend earning a credential, and whether doing so is likely to be in their grasp. Also, it does little to detail how quickly students who begin their studies with substantial prior learning or who can quickly demonstrate mastery in competency-based programs can expect to complete.

Figure 1. Share of Students Missing in IPEDS Graduation Rate Calculations



Now is the time to rethink IPEDS graduation rates. Prospective students should have confidence in the information they rely on to decide where (or whether) to attend college, which means those measures must be responsive to the diversity of pathways that today's innovative policies and pedagogies make possible. Similarly, quality, accountability, and improvement efforts that are central to the work of so many educators and policymakers must be based on measures that can capture the experiences of the full student body, not a shrinking slice of that population, if they are to yield useful results.

Finding a Better Way to Measure Student Success

Several projects have sought to identify better ways to collect, measure, and report information about student persistence and completion. Many make clear that they are motivated, at least in part, by an IPEDS graduation rate that fails to take into account the experience of the non-first-time, non-full-time learner. These include Transparency by Design,[7] the Voluntary Institutional

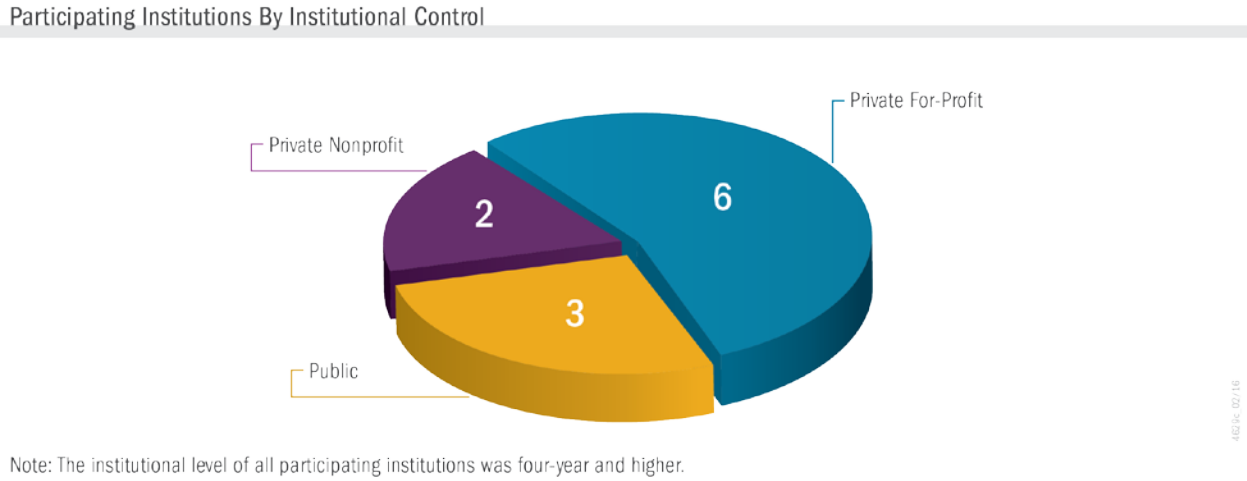
[7] Morrison, C. (n.d.) Transparency by design. Retrieved from http://wcet.wiche.edu/initiatives/past-projects/transparency-by-design

Metrics Project,[8] the Voluntary System of Accountability,[9] and, most recently, SAM.[10] In partnership with the National Student Clearinghouse (NSC), SAM has gained particular momentum, a testament both to the urgency of this problem and the value SAM offers the schools who use it.[11]

As the next Congress considers reauthorization of the Higher Education Act, what lessons should policymakers take from these efforts to reform how federal graduation rates measure student success, particularly the success of those who did not begin as *full-time*, *first-time* students?

To answer this question, AIR collaborated with a network of 11 postsecondary institutions serving large numbers of transfer, adult, and part-time students. (See Figure 2). Each provided anonymized, de-identified student record level data that allowed AIR researchers to better understand—albeit imperfectly—the consequences of measurement choices used in three existing persistence and completion metrics: IPEDS GR, IPEDS OM, and SAM. (See Table 1.)

Figure 2. AIR's Partners by Institutional Control



[8] HCM Strategists. (2013). The voluntary institutional metrics project. Retrieved from http://hcmstrategists.com/analysis/voluntary-institutional-metrics-project/
[9] Voluntary System of Accountability. (n.d.) The college portrait. Retrieved from http://www.collegeportraits.org/
[10] Keller, C. (2013). Student achievement measure. Retrieved from http://studentachievementmeasure.org/
[11] Partners include the National Student Clearinghouse, Voluntary Framework of Accountability, Voluntary System of Accountability, Froeter Design, Thirdwave, the Bill & Melinda Gates Foundation, Carnegie Corporation, the Association of Public and Land-Grant Universities, and the American Association of State Colleges and Universities.

Table 1. Existing Measures at a Glance

Measure	Description
IPEDS Graduation Rate Survey	An annual IPEDS survey component added in 1997 to help institutions satisfy the requirements of the Student Right-to-Know and Campus Security Act. Data are collected on the number of students entering the institution as full-time, first-time, degree- or certificate-seeking undergraduate students in a particular year (cohort), by race/ethnicity and gender; the number completing their program within 150 percent of normal time to completion; the number who transfer to other institutions if transfer is part of the institution's mission.
IPEDS Outcomes Measure	An annual IPEDS survey component added in 2015 to improve the collection of student persistence and completion data on a more diverse group of undergraduate students at degree-granting institutions. Award and enrollment statuses are collected on four cohorts of degree- or certificate-seeking undergraduate students (full-time, first-time; part-time, first-time; full-time, non-first-time; and part-time, non-first-time) at two points in time (six years and eight years from the point of entering the institution).
Student Achievement Measure (SAM)	An alternative, voluntary methodology for reporting undergraduate student progress and completion that was developed in 2013 through a partnership of the six national higher education presidential associations. SAM currently includes two reporting models: one for students seeking a certificate or Associates degree; and one for students seeking a Bachelor's degree. The SAM Bachelor's model reports award and enrollment statuses on up to four cohorts of degree-seeking undergraduate students (full-time, first-time; full-time, non-first-time, and [optionally] part-time, first-time; and part-time, non-first-time) annually. Charts appearing on the SAM website display outcomes at three points in time (two, four, and six years from the point of entering the institution for full-time non-first-time students; four, five, and six years from the point of entering the institutions for full-time, first-time students; six, eight, and ten years for part-time students) across multiple higher education institutions.

Our work makes one thing clear: Despite significant progress, our nation's students, families, and decision makers are still far from having access to full information about the persistence and completion experiences of too many learners. As a result, we advocate for three measurement principles that, if more fully adopted, would increase the amount and quality of data about student persistence and completion that could be made available to those who need it.

- *Principle 1: Include all students.* An institution should monitor the persistence and completion outcomes of every student it enrolls, without exception.
- *Principle 2: Include all persistence and completion outcomes at all institutions.* An institution should monitor a student's persistence and completion outcomes even after transfer, and know what those specific outcomes *are* – including continued persistence at a transfer institution or degree completion there. With the continued expansion of the NSC, federated longitudinal data systems, and other data exchanges, it is increasingly possible to monitor the persistence and completion outcomes of virtually every transfer student.

- *Principle 3: Use a student's perspective of time to report yearly outcomes annually.* An institution should measure students' persistence outcomes in a familiar metric, elapsed calendar time, and collect those outcomes in a way that allow the creation and reporting of metrics annually. It should be possible to collect (and report on) Year 1 outcomes of a cohort of enrollees, for example, within a year of those outcomes having been observed by the institution.

These principles have seen varying degrees of convergence among higher education stakeholders: The first two enjoy near-universal consensus, but the latter, to our knowledge, has not been explored prior to this work. We describe each principle in more detail later, including its relationship to existing measures. Using data provided by institutional collaborators, we also describe how each principle's adoption yields more information about the persistence and completion experience of today's students.

Institutional Participants

Eleven institutional collaborators participated with AIR in this work (see Figure 2). This included three four-year, public institutions; two four-year, private nonprofit institutions; and six four-year, private for-profit institutions. Although both small and large institutions were represented in the study, the modal college enrolled more than 20,000 students annually.

A central focus of this work was to develop principles for persistence and completion measures that were appropriate for institutions that served all types of learners, including working adults, transfer students, and online learners. Not surprisingly, several participating institutions offered their programs exclusively by distance education, and most enrolled higher-than-average proportions of part-time students, older learners, and students from racial and ethnic minority groups.

This has profound effects on the proportion of entering students that institutions are able to include in their IPEDS graduation rate cohort. All but one excluded more than half of their entering class of 2007-08, and seven excluded more than 80 percent of new students.

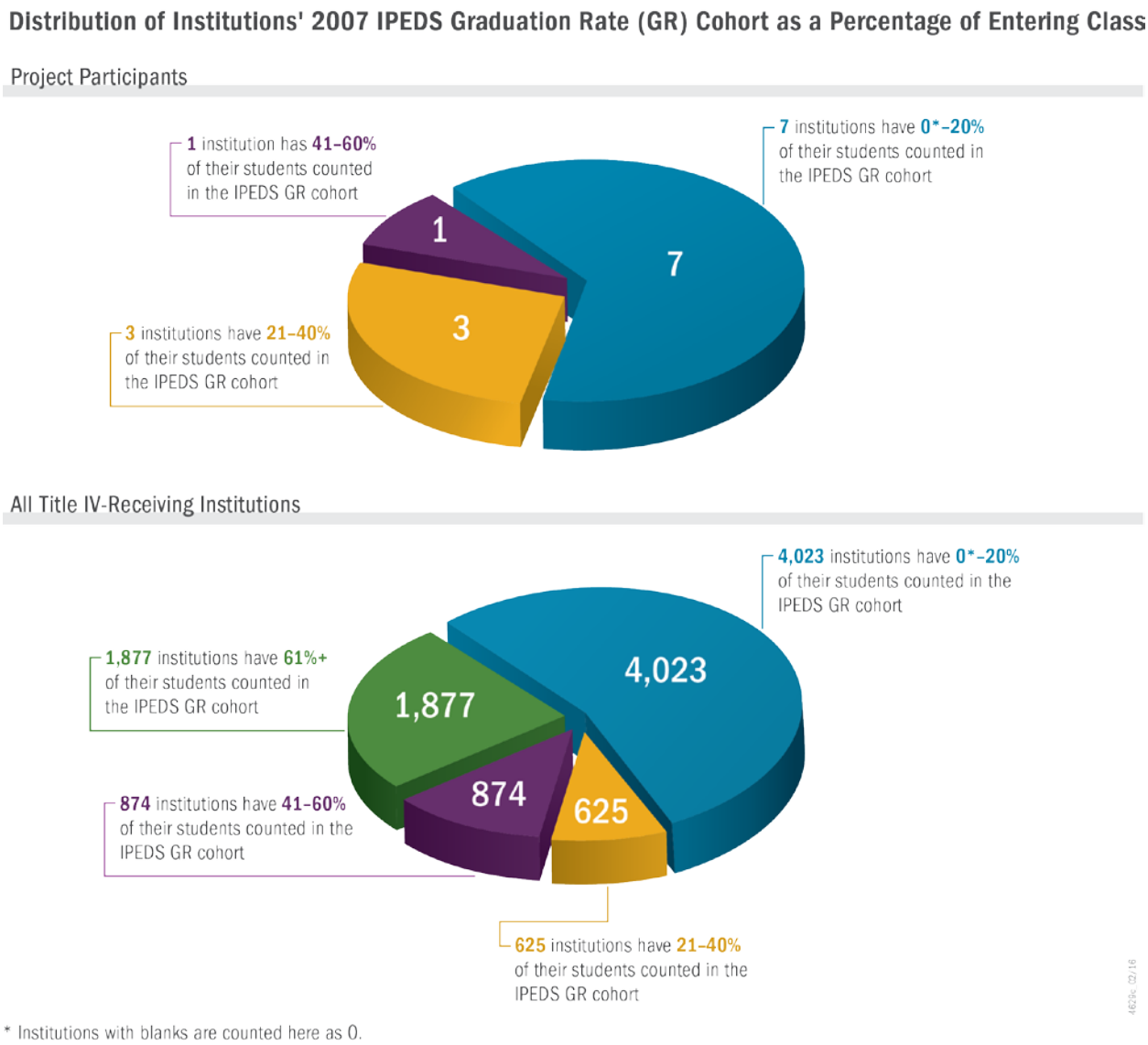
Principle 1: Include All Students, Expanding the IPEDS Graduation Rate Cohort

Monitoring the persistence and completion outcomes of all entering students, regardless of their prior college experience or first-term enrollment intensity, is among the most commonly proposed improvement to the IPEDS graduation rate methodology. Most of the prior efforts to improve on GR place this element at their core, and it is central to an inclusive measure of student outcomes. Figure 3 demonstrates why that is: The majority of colleges and universities in the United States have less than half of their students represented in their IPEDS graduation rate cohort. The same is true among our institutional collaborators (see sidebar).

The central philosophical argument for including all students in persistence measures is that institutions are responsible every student they enroll, not a select subset. From the perspective of those interested in improved data for decision making, including all students in an institution's persistence and completion reporting makes it possible to create representations of student outcomes and institutional performance that are more comprehensive. When paired with data

that allow key metrics to be disaggregated by important student characteristics, those representations can also be more nuanced, promoting comparability. Finally, including all students in persistence and completion reporting helps to guarantee fair play among institutions, closing the door to insinuations that institutions actively manage membership in IPEDS graduation rate cohorts to improve their reported graduation rates.

Figure 3. Distribution of Institutions' 2007 IPEDS GR Cohort as a Percentage of Entering Class



Enhancements to IPEDS through its new OM component, and new measurement systems such as SAM, have made substantial progress toward the goal of including all students in persistence metrics. For its part, IPEDS OM reports on the outcomes of four cohorts that, together, include all of an institution's students: full-time, first-time; full-time, non-first-time; part-time, first-time; and part-time, non-first time. SAM provides institutions a similar opportunity, though it makes reporting the outcomes of part-time enrollees optional. Both approaches demonstrate it *is* possible to dramatically expand how many students are included in persistence and completion metrics while offering two additional lessons for the future.

Looking Beyond the First-Time, Full-Time Cohort

Our 11 collaborators were chosen because of their commitment to serving students who are often excluded from the federal graduation rate measure. In Table 2, we describe the enrollment intensity profiles of three institutions – one public, one not-for-profit, and one for-profit – that we use as exemplars throughout this report. Each has a relatively small proportion of students in its GR cohort who are first-time, full-time enrollees, particularly when we focus on the subset of those students seeking a bachelor's degree.

Table 2. Distribution of Entering Students in Bachelor's Degree–Seeking Subcohort by Enrollment Intensity at Entry: Exemplar Institutions

Institution	Distribution of Entering Bachelor's-Seeking Cohort, by Enrollment Intensity			
	First-Time, Full-Time	First-Time, Not Full-Time	Not First-Time, Full-Time	Not First-Time, Not Full-Time
Exemplar 1	13 %	29 %	27 %	31 %
Exemplar 2	1 %	1 %	77 %	21 %
Exemplar 3	12 %	20 %	48 %	20 %

It is not surprising that adopting a measure of persistence and completion that explicitly includes the experiences of all learners—not just those that were first-time, full-time—yields a substantial amount of new information about the performance of these institutions. We outline the rate at which bachelor's degree seeking students completed their degree within six years at our exemplar institutions in Table 3.

Table 3. Percentage of Bachelor's Degree–Seeking Subcohort Completing at Home Institution by Enrollment Intensity at Entry: Exemplar Institutions

Institution	Completion Rate at Home Institution, by Enrollment Intensity			
	First-Time, Full-Time	First-Time, Not Full-Time	Not First-Time, Full-Time	Not First-Time, Not Full-Time
Exemplar 1	8 %	3 %	47 %	23 %
Exemplar 2	33 %	14 %	73 %	32 %
Exemplar 3	23 %	< 1 %	55 %	7 %

As it is currently designed, IPEDS GR only provides the information about outcomes of students found in Table 3's first column. There, we see that first-time, full-time bachelor's degree–seeking students at Exemplar 1 only complete their degree within six years at a rate of about 8 percent. But, with additional information, we learn that nearly half of not first-time, full-time students (the third column) and almost a quarter of not-first-time, not-full-time students (the fourth column) complete within 6 years. After accounting for the relative sizes of those populations outlined in Table 2, this tells a very different story for Exemplar 1: the students found in columns 3 and 4—nearly 60% of all students—are performing many times better than is suggested by the outcomes of their first-time, full-time peers, the only data currently available in IPEDS.

Our point is not simply that including all students in measures of persistence and completion would demonstrate that institutions are helping more students earn a certificate or degree than IPEDS GR currently suggests, though that is a likely outcome. Instead, it is important to include all students in measures of persistence and completion because it provides the complete information that students, educators, and policymakers need to make smart choices that will affect their own lives, the lives of the learners they serve, and the fortunes of the institutions they oversee.

It is certainly possible that, with full information, we may not like what we see about institutional performance. But at least we see that performance clearly.

Luckily, there are already tools in our toolbox to better understand the outcomes of students who are not-first-time, full-time college goers. IPEDS OM will soon provide information on not-first-time students and first-time, part-time enrollees. For its part, SAM already reports on full-time transfer students in bachelor's degree programs, and makes it possible for institutions to report on part-time student outcomes. Despite broadening the scope of student populations captured in persistence and completion metrics, however, SAM does not insist that institutions track *all* of the students that are currently excluded by IPEDS GR. Due to data limitations, students who do not enroll in the fall term are excluded from the measure.

Our Data

Collaborators submitted anonymized, de-identified student-record level data to AIR for all students who entered their institutions in the 2007–08 academic year. This included information on students' demographic characteristics, transfer and military status, and data on financial need. Course-level enrollment data through the 2013–14 academic year provided by institutions allowed AIR to create student-specific, rather than academic-calendar based, persistence and completion metrics. Finally, institutions provided the result of National Student Clearinghouse *StudentTracker* queries to AIR so that metrics could include students' post-transfer outcomes.

Questioning Enrollment Intensity

Our analysis of data provided by our institutional collaborators suggests that a student's enrollment intensity (i.e., part-time versus full-time), a fundamental concept used in measuring persistence and completion, is an already complex phenomenon that is poised to become only more troublesome in the future. At least among the institutions included in our network, AIR researchers found that students change their enrollment intensity frequently from term to term,

and in unpredictable ways. Persistence and completion measures that rely upon students' enrollment intensity at the beginning of their studies may find that the homogenous group they believe has been constructed is in fact quite varied, calling in to question the usefulness of the resulting metrics.

A somewhat obvious solution to this problem, using more nuanced categories such as *always full-time, always part-time,* and *mixed* to create cohorts of students once their actual behavior has been observed, may not be as helpful as it seems. As students increasingly take advantage of the diversity of credentialing pathways many institutions now offer, such as prior learning assessment and competency-based education, the concept of enrollment intensity is becoming timeworn.

Federal policymakers in particular should take an important lesson from the declining importance of enrollment intensity: design for tomorrow, not today. This means more than building metrics that are tailored to anticipated changes we can see on the horizon. It means crafting systems of data collection and reporting that are intentionally and explicitly flexible, making it easier (if not easy) for the students, educators, and policymakers of the future to get relevant information on learner outcomes.

Principle 2: Include All Outcomes at All Known Institutions

Censoring an institution's incoming cohort of students is not the only place where the IPEDS GR rate loses information; important student outcomes also go unobserved. As we have noted previously, IPEDS instructs colleges to exclude any student who transfers *to* the instruction from the cohort of students on which graduation rates are calculated. When it comes time to do that calculating, students who leave campus and pick up their studies elsewhere are counted as part of an undifferentiated *transfer-out* rate, leaving the specific outcomes they achieve unmeasured and unreported.

The result is an incomplete—and some would say unfair—picture. Virtually all recent proposals for the improved measurement of student persistence and completion now acknowledge that we should not only expand the coverage of *students* in institutional performance metrics (see previously), but also our coverage of those students' *outcomes*. The argument for expanded measurement of student outcomes is motivated not only by our prior observation that institutions should be responsible for each student they enroll, but also by a belief that every institution in which a student enrolls has the potential to make a positive contribution to his or her success.

Institutions of all types risk being short-changed by a system that incompletely monitors student outcomes. This includes the nation's community colleges, which provide a critical access point for students who ultimately intend to earn a bachelor's degree, as well as completion colleges and other institutions that cater to returning adult learners who have already earned some credits toward a degree.

What many see today as a flaw in IPEDS GR is, at least in part, a reflection of the very real technological limitations that existed when the measure originally was conceived. Until relatively recently, most institutions did not have access to data systems that made it possible to

monitor the outcomes of students who transferred from their institution to another college or university. Indeed, there are likely some individual institutions where that information is still not available, campus leadership having determined that the costs of tracking post-transfer outcomes outweigh any potential benefits.

However, institutions' capacity to track students across institutions and report on their subsequent outcomes has been dramatically increased by the resources of a third party, the NSC. Originally developed to assist colleges and universities in mandatory enrollment reporting to ED for federally-aided students, NSC has opened its enrollment and degree verification services to the general public on a fee-for-service basis. It now houses records for institutions enrolling 98 percent of all students, allowing participating institutions to query its databases and retrieve students' enrollment and degree completion histories across the whole of postsecondary education.[12]

By combining locally held data with information provided by NSC, it is possible for an institution to track the persistence and completion outcomes of virtually every student it enrolls, regardless of where those outcomes are achieved. The expansion of state longitudinal data systems to include information on the outcomes of students enrolled at public—and sometimes nonprofit and for-profit—colleges provides a similar opportunity, albeit for a smaller set of students. Interstate data sharing agreements and federated systems that virtually leverage the data resources of several states are also increasingly common.

One new metric, SAM, recognizes the potential of these systems to increase the information that learners, educators, and policymakers have about institutional performance and student outcomes. Unlike IPEDS survey components, SAM leverages its partnership with the National Student Clearinghouse to monitor students' outcomes after transfer. What results is a more complete portrait of students' movements through postsecondary education, and hopefully attainment of a degree or certificate.

The innovation of measures like SAM is that they can extend our ability to understand students' outcomes post-transfer, a place where both IPEDS GR and OM fall short. Although SAM currently tracks the post-transfer outcomes for only those students seeking a bachelor's degree, both their data and ours demonstrates just how important even this improvement over GR and OM can be. In Table 4, we augment the persistence and completion metrics for our Exemplar Institutions by adding NSC data on our bachelor's degree–seeking students' post-transfer outcomes.

[12] National Student Clearinghouse. (n.d.) Who we are. Retrieved from http://www.studentclearinghouse.org/about/

Table 4. Percentage Distribution Of Persistence And Completion Outcomes By Year Six Of Bachelor's Degree–Seeking Subcohort: Exemplar Institutions

Institution	Persistence and Completion Outcomes By Year Six, Bachelor's-Seeking Students					
	Completion at Home	Persistence at Home	Completion Elsewhere	Persistence Elsewhere	Simultaneous Enrollment	Status Unknown
Exemplar 1	22 %	7 %	14 %	12 %	< 1 %	45 %
Exemplar 2	63 %	2 %	8 %	< 1 %	< 1 %	27 %
Exemplar 3	31 %	2 %	8 %	10 %	< 1 %	50 %

Adding information about persistence and completion behaviors at colleges and universities beyond students' home institution does three things.

- First, it demonstrates the rate at which students who leave a given institution ultimately are successful. At some institutions, this rate can be substantial: Although 22 percent of students at Exemplar 1 complete a degree there within six years, another 14 percent leave and complete somewhere else. Many have advocated the creation of a "completion anywhere" metric as a way to document this behavior and highlight institutions role in preparing students for subsequent success.

- Second, augmenting local data with information about persistence and completion elsewhere reduces the proportion of students mischaracterized as having dropped out of college. Up to a quarter of cohort members considered by their home institutions as being not enrolled were actually pursuing their studies elsewhere. Unfortunately, we still see institutions where the presumptive drop-out rate (or, as we hopefully refer to it as, "status unknown") reaches half of all starting students.

- Third, these data highlight a small population of students: those who are enrolled simultaneously at multiple institutions. Table 4 understates the frequency with which this occurs, because it is focused on students' statuses as of their sixth year. For some institutions in our study, the rate of simultaneous enrollment reached nearly 15 percent, most often in students' earliest years of enrollment.

Persistence and completion metrics also must acknowledge that students' degree intentions change over time. Although the quintessential example of shifting degree intentions likely remains the student who begins in a community college in an associate's degree program but subsequently transfers to a four-year college to complete their bachelor's degree, change is in no way predicated on transfer and is not always in an upward direction. Using national data from the Beginning Postsecondary Students Longitudinal Study of 2012-2014, we summarize both phenomena in Table 5.

Table 5. Percentage Distribution of Students' Degree Level in 2014, By Starting Level in 2012 and Transfer Status: 2012–14

Degree Level, 2012	Degree Level, 2014		
	Certificate	Associate's Degree	Bachelor's Degree
Never Transferred			
Certificate	95 %	4 %	1 %
Associate's Degree	6 %	89 %	2 %
Bachelor's Degree	1 %	2 %	94 %
Transferred			
Certificate	23 %	54 %	14 %
Associate's Degree	13 %	29 %	47 %
Bachelor's Degree	7 %	26 %	49 %

Note. Rows do not sum to 100 percent due to transfer to graduate or non-degree programs.
Source: U.S. Department of Education, National Center for Education Statistics, 2012–14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14). Available using PowerStats QuickRetrieve code *bhbbgb79*.

Current measures incompletely address the issue of students' changing degree intentions. For its part, IPEDS GR captures the actual level of study completed by two groups: (1) bachelors' degree–seeking students, and (2) certificate or associate's degree–seeking students. Changes in level during periods of persistence are not tracked at all. And, because it does not track students after transfer, it cannot address the situation in which an associate's degree–seeking student eventually changes their goal to the baccalaureate, and earns it elsewhere.

Because it is designed to follow students across institutions, SAM has the *potential* to track completions post-transfer for all students. Given the increasing emphasis educators and policymakers have placed on developing structured pathways to the bachelor's degree that include preparation at community colleges, this seems like an important oversight. However, it only does so for bachelor's degree–seeking cohorts. Tracking stops at transfer for those students we might presume to be most likely to change their level of study, those who initially began at the certificate or associate's degree level. We advocate marrying the best of both approaches, reporting on the level of study associated with any persistence and completion outcome.

The Problem of Granularity in Outcomes Collection and Reporting

But just how detailed should that portrait of student outcomes be? As shown in Table 6, there are five primary persistence and completion statuses. The sixth, "unknown" reflects the reality that despite data resources that increasingly allow us to observe student enrollment anywhere across the entirety of postsecondary education, what appears as a "stop out" may be a gap in data systems, not in a student's pursuit of a certificate or degree.

Table 6. Possible Student Persistence and Completion Statuses

Status
Enrolled at Home Institution Only
Enrolled at Transfer Institution Only
Enrolled at Home *and* Transfer Institution
Completed at Home Institution
Completed at Transfer Institution
Unknown

Being able to report that a given student enrolled in one college, transferred to another, and then completed their degree is critically important, but it still doesn't tell the whole story. Persistence and completion behaviors aren't characterized simply by *where* something is happening. In an era of stackable credentials, free community college, and better articulated two- to four-year pathways, persistence and completion *at what level* is an increasingly important question. Data from NCES's *Beginning Postsecondary Students Longitudinal Study of 2011–2014* highlight this point: 19 percent of degree-seeking students who began their studies in 2011–12 had changed to another level of study by 2014, including 17 percent of certificate seekers, 26 percent of associate's degree seekers, and 13 percent of bachelor's degree seekers.[13] As a result, we believe students' pathways across *levels* of study should be documented: A student may well enter seeking a certificate, only to switch to a bachelor's degree program when she discovers it is within her reach.[14]

Current measures of persistence and completion do not fully capture the data needed to depict the complexity of students' persistence and completion outcomes. Rather than capturing all possible starting levels of study, IPEDS GR only allows institutions to distinguish between degree/certificate-seeking students and non-degree/non-certificate-seeking students at entry. Bachelor's degree-seeking students are further identified the following fall, as part of the calculation of institutional retention rates. When it is time for institutions to report on those students' outcomes, IPEDS GR does require institutions to indicate what students actually earned, be it a certificate, an associate's degree, or a bachelor's degree.[15] As noted earlier, IPEDS GR makes no attempt to capture outcomes post-transfer, nor does it collect data on students' simultaneous enrollment at multiple colleges or universities.

Unfortunately, even when persistence and completion data are collected at a relatively granular level, that does not mean those data are translated reliably into complete information for the public. NCES's *College Navigator*, the primary vehicle through which ED disseminates persistence and completion information, highlights only the following three data points for the typical four-year college: (1) the rate at which all entering students in a given cohort earned a

[13] Author's calculations from U.S. Department of Education, National Center for Education Statistics, 2012–14 Beginning Postsecondary Students Longitudinal Study (BPS:12/14). Available using PowerStats QuickRetrieve code *bhbbgb9b*

[14] This possibility is why we later recommend tracking student persistence and completion outcomes for all students for a period of six years, regardless of program of study.

[15] Technically, IPEDS asks institutions to indicate whether students were completers of academic programs that were "less than 2 academic years," "at least 2 but less than 4 academic years," or "bachelor's or equivalent degrees."

credential, (2) the transfer-out rate among those same students, and (3) the rate at which bachelor's degree–seeking students completed a baccalaureate degree. Similar data are presented for institutions that do not award bachelor's degrees, but outcomes for students seeking associate's degrees versus certificates are not disaggregated.

The SAM metric fills a significant share of the information gap left by IPEDS GR. By verifying transfer, and then collecting and reporting on post-transfer outcomes for bachelor's degree-seeking students, SAM turns IPEDS' undifferentiated data on transfer-out into more useful information about student success. In addition, as noted previously, by making it possible for institutions to report outcomes on students who transfer *to* an institution, SAM provides useful information to learners who are thinking about completing their degree somewhere other than their first institution. SAM does not capture simultaneous enrollment, and it does not fully disaggregate the pathways of certificate- and associate's degree–seeking students. Nonetheless, it is best-in-class among current persistence and completion metrics.

Principle 3: Use a Student's Perspective of Time to Report Yearly Outcomes Annually

No student has ever said to their family that they "hope to finish college within 150 percent of normal time to a degree." Returning adult learners are not thinking about how many academic terms' worth of smaller paychecks they will receive as they reduce their workloads to squeeze in coursework. Transfer students, students who have received credit for prior learning, or students in competency-based programs that permit accelerated credentialing contingent on demonstrated mastery are not terribly interested in knowing whether they will finish in four years from a given college; instead, they would like to know how often people finish in one or two. And no one wants to wait six years to see how the latest crop of bachelor's degree enrollees have fared.

The treatment of time by traditional measures of persistence and completion is anachronistic. So, too, is the frequency with which outcomes are observed and reported. Students' information needs, and the student experience itself, should be placed at the center of persistence and completion measures.

Measure Time from the Student's Perspective

Although many institutions continue to mark time using quarters, semesters, and academic years, a growing number of campuses—as well as individual programs within traditionally-calendared colleges and universities—allow students to begin their studies on a monthly, weekly, or even daily basis. A boon to learners, this flexibility can make reporting student outcomes tricky.

Take, for example, the IPEDS "full-year cohort," in which all students who enter an institution between September 1 of one year and August 31 of the next are grouped for the purposes of enrollment, persistence, and completion reporting. If Sally begins her studies on September 1, 2016, and remains continuously enrolled until September 2, 2017, it is fairly clear that she has entered her second year of college. If John starts later—say, December 1—then by September of the following year, we still would likely say the same. But if he started on January 1, we'd begin to worry. Should we only count him as having been "in college" for a semester? What if his

program began in June? Although John had been enrolled in two different academic years, in truth only a few months had elapsed. How institutions should reconcile these sorts of issues, not to mention how they actually do in practice, is far from clear.

There is a simple solution: Use elapsed calendar time to measure persistence and completion events.

In addition to promoting comparability—a month is a month, no matter an institution's academic or business rules—measuring elapsed time to an event is precise. Consider Sally and John, mentioned previously: Today, both are members of the same full-year cohort that began on September 1, 2016. On September 1, 2017, Sally will have been in her second academic year, enrolled for an elapsed 366 days. Her fellow cohort member John, had he began his studies on December 1, 2016, would also be enrolled in a second academic year, but with only 275 days having elapsed. If he had waited until June 1, 2017, to begin, John would still be in a "second" academic year by September 2, 2017, but only 92 days would have elapsed. The 274-day difference between Sally and John's experience might look the same in a table tracking persistence across two academic years. But, from the lived experience of the learners, it is very different.

Collect Yearly Outcomes Data on an Annual Basis

How persistence and completion metrics are to be reported by the federal government, and therefore how data are collected by IPEDS GR, are driven largely by requirements established by the Student Right-to-Know Act. At inception, section 103 of that act introduced the notion of reporting graduation rates at "150 percent of the normal time for completion or graduation of [a] program."

The most recent reauthorization of the Higher Education Act, known as the Higher Education Opportunity Act, expanded that reporting requirement to include rates at 100 and 200 percent of normal time. The shift to reporting the "100 percent of normal time" for all programs of study[16] represents a significant improvement over the 150 percent metric. It is, after all, called "normal" time for a reason: It comports with people's preconceptions about how long it *should* take to earn a certificate or degree.

But with the rapid expansion of postsecondary pathways that are designed to help learners accelerate the credentialing process, a new normal may be emerging. Opportunities such as dual enrollment, prior learning assessment, and competency-based education stand to significantly decrease time-to-degree for many types of learners. For bachelor's degree–seeking students, this means it may soon be as common to see completions two or three years after entry into postsecondary education, as it is today to see completion at Years 4 and 5.

We argue that it is time to leave behind the confusing jumble of metrics tied to various percentages of time and normal program lengths. Instead, following the lead of projects like SAM, yearly persistence and completion metrics should be reported for a standard six-year period, regardless of program length or award level. Collecting data at this fine level of detail

[16] As opposed to only reporting the four-year graduation rate for bachelor's degree–seeking students

allows a variety of reporting opportunities, depending on the specific needs of an audience. In Table 7, we provide an example of reporting out yearly completion outcomes for our three exemplar institutions.

Table 7. Yearly Bachelor's Degree Completion Rate Among Bachelor's Degree–Seeking Students at Home Institution, by Transfer Status at Entry: Exemplar Institutions

Institution	Yearly Outcome					
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Exemplar 1	< 1%	4 %	10 %	15 %	19 %	22 %
Transfer	< 1%	6 %	17 %	24 %	30 %	34 %
Not transfer	< 1%	< 1%	1 %	2 %	3 %	5 %
Exemplar 2	< 1%	25 %	51 %	60 %	62 %	63 %
Transfer	< 1%	25 %	51 %	61 %	63 %	64 %
Not transfer	< 1%	< 1%	10 %	15 %	20 %	20 %
Exemplar 3	< 1%	12 %	21 %	25 %	30 %	31 %
Transfer	1 %	17 %	30 %	37 %	40 %	41 %
Not transfer	< 1%	< 1%	< 1%	1 %	8 %	9 %

In this case, outcomes are presented both for the entire entering cohort of bachelors' degree–seeking students and for an important distinction between students: those who transferred to an institution versus those who did not.

Reporting yearly student persistence and completion metrics accomplishes three important goals.

- First, it allows institutions to document, and stakeholders to see, how successful campus efforts at acceleration truly are, particularly for associate's and bachelor's degree–seeking students.

- Second, when paired with our proposal to track outcomes across institutions, it provides institutions that prepare students for transfer—from community colleges to some regional campuses—a mechanism to more fully demonstrate their contribution to student success by providing a full six years for outcomes to accrue. Similarly, it allows us to capture change in level unrelated to transfer that otherwise would be masked by the relatively short measurement period afforded some certificates, such as the experience of a learner who enrolls seeking a certificate in allied health who discovers that a bachelor of science degree in nursing is well within reach.

- Finally, it reduces complexity: the same information is available for all programs, without regard to a "normal" length of time that is increasingly arbitrary.

We believe there is little to be gained by following students for eight years, as is currently done by IPEDS GR and OM. Our analysis of IPEDS data suggests that the median increase in completion rates is small. The burden these data represent is better spent elsewhere.

Report Outcomes Annually

Six years is a long time for stakeholders to wait before being given information about the success of an entering cohort of bachelor's degree–seeking students. It is not the case that students' persistence histories are not known to institutions until years after entry—headcount enrollment numbers are produced annually, for example—it is simply that persistence and completion metrics are either (1) not calculated on an annual basis, or (2) more likely, calculated in some form for internal use but not reported.

It is time to make persistence and completion metrics available on a timelier basis to students, educators, and policymakers. At any given time, institutions are tracking six cohorts of bachelor's degree–seeking students to ultimately generate graduation rates required by the Student Right-to-Know and Campus Security Act. Rather than reporting six years of outcomes data on one of those cohorts each year, institutions should report on the most recent available year's outcomes for each.

What would result is near-real-time information on student success, not a retrospective look at a cohort that began college when recent high school graduates were middle-schoolers. Far from just an improvement in consumer information, relatively contemporaneous information about student persistence and completion can help institutions, states, and the federal government to track changes associated with planned policy shifts as well as unexpected shocks. Finally, in an era when student success data are increasingly used for the purposes of accountability and resource allocation, making sure those data are as current as possible make for smarter, and fairer, decision-making.

Toward a More Inclusive Measure: Adopting IMSO Principles

So what happens to our understanding of student persistence and completion when an institution-level measure following our three principles—including all students, including all outcomes across all institutions, and reporting annually on yearly outcomes—is adopted? The value of each is illustrated using data from three of our institutional collaborators.

Figure 4 brings together the first two IMSO principles, including all students and include all persistence and completion outcomes at all known institutions, and presents a contrast again extant measures. This includes IPEDS GR and SAM, as well as IPEDS OM, though for the sake of comparability across metrics we create a bachelor's degree-seeking subcohort within OM that the current data collection does not include. All contrasts use exemplar institution data for the 2007-2008 entering cohort of bachelor's degree-seeking students.

The improvement the IMSO principles represent over both the IPEDS and SAM measures is substantial. Using Exemplar Institution 1 as an example:

- *IPEDS GR.* As shown in the first column, the 3 percent graduation rate reported by IPEDS GR for Institution 1 is based on 2 percent of that institution's entering cohort. IMSO includes 100 percent of the institution's entrants, and provides an unbiased estimate of institutional performance: a rate that is 12 times higher.

- *Modified IPEDS OM.* As shown in the second column, the 34 percent graduation rate reported by IPEDS OM for Institution 1 is based upon coverage of only 6 percent of the institution's entering cohort. The part-time graduation rate of 21 percent covers an additional 32 percent of the cohort, meaning that, in total, 38 percent of entrants are covered. While this coverage is broader than IPEDS GR, it still covers a relatively small portion of entering students.

  This highlights an important element of IPEDS graduation rate reporting that affects both GR and OM: whether an institution chooses to report on its *fall entering cohort* or a *full-year entering cohort.* Because Institution 1 is a fall reporter—and most of its students do not enroll by October 15—even OM ignores a substantial portion of enrollees.

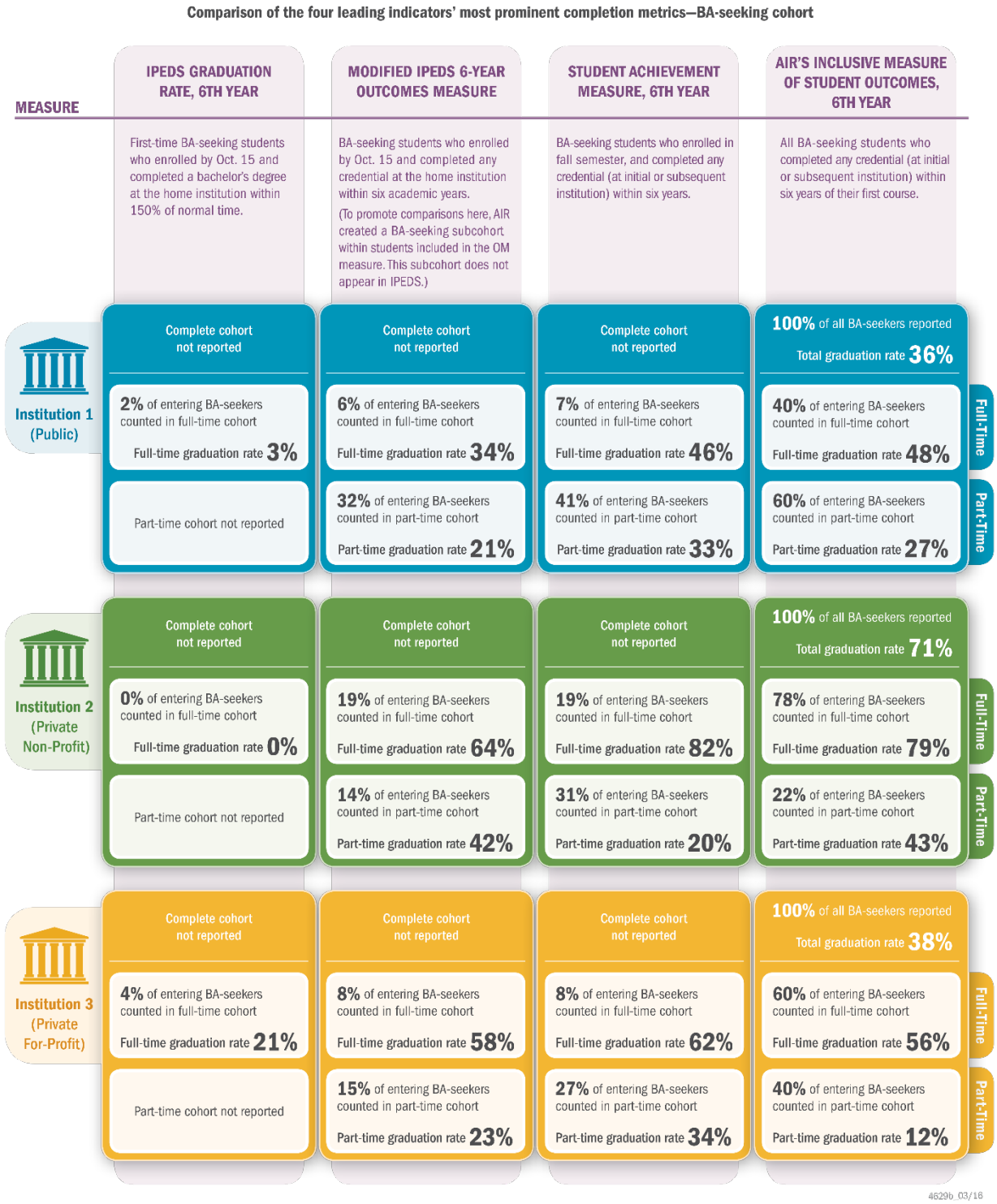
  Nonetheless, Figure 4 demonstrates the vast potential of a measure like OM: our modified version, which focuses exclusively on the subcohort of BA-seeking students, suggests that more than a third of entering full-time students, and about a quarter of entering part-time students, actually complete a credential.

- *SAM.* As shown in the third column, completion rates generated using methods like those used by SAM can be—but are not necessarily—higher than those from IPEDS OM. In the case of Institution 1, those rates appear to be much higher: 64 percent for the full-time cohort and 58 percent for the part-time cohort. These rates, however, are based on 4 percent and 16 percent of entrants, respectively. With 20 percent of all entrants covered, SAM's coverage is higher than IPEDS GR, but still accounts for the outcomes of less than a quarter of entering students at Institution 1.

- *IMSO.* Unlike GR, OM, and SAM which purposefully exclude certain students from persistence and completion measures, the IMSO principles purposefully includes all students. In the case of Institution 1, we see that capturing the completion outcomes of all BA-seeking undergraduates, regardless of when they entered in the 2007-08 and with what enrollment intensity, yields an actual overall graduation rate of 36 percent, with a full-time graduation rate of 48 percent and a part-time graduation rate of 27 percent.

Only a measure that includes *all* students in an incoming cohort can serve as the basis for an unbiased measure of student persistence and completion. Proponents of other measures rightfully argue that there are reasons to narrow the focus of persistence and completion statistics, be it for the sake of comparability or specific policy interests. But that narrowing should happen as stakeholders are making conscious choices about *reporting*, not collection. Otherwise, the true performance of many types of institutions—most especially those that serve returning students, transfer students, and adult learners—can never be properly characterized.

Figure 4. Comparison of Existing Completion Measures and IMSO Principles



Action Steps

Now two years in to our collaboration with 11 institutions—each striving to ensure the success of working learners, transfer and part-time students, and students who are completing coursework through distance education—we have arrived at the following three familiar principles that should guide any measurement of student persistence and, by extension, institutional performance:

- Include all students.
- Include all persistence and completion outcomes at all institutions.
- Use a student's perspective of time to report yearly outcomes annually.

These are not new ideas. What *is* new, we believe, are our findings of just how important it is to enact each of these principles with fidelity. When this does not occur, we can be sure of one thing: The data we have about institutional performance and student success is incomplete. Good decisions can arise from incomplete data, but the best decisions come from full information. Savvy decision makers—be they students, educators, or policymakers—should demand full information.

So where, and how, do we begin? We have suggestions in three areas.

Institutions

Institutions should, if they have not already, begin to develop data collection and reporting systems that are consistent with the IMSO principles. This provides institutions information that can be used for continuous quality improvement and enrollment management purposes. Indeed, each institutional collaborator already was conducting some form of the collection and reporting we suggest here. That information simply was not publicly reported. Starting to put more robust collection and reporting systems in place also prepares institutions for a potential future where federal and state persistence and completion reporting requirements are more extensive than they are today.

Practically, this means institutions should consider three things. The first is straightforward, and is already a virtual necessity given the new IPEDS OM measure: Begin monitoring the performance of student cohorts beyond the one covered in IPEDS GR. Second, identify how to best leverage one or more external data sources, such as the National Student Clearinghouse, a state longitudinal data system, or Federal Student Aid Transfer Student Monitoring, to not just *confirm* transfer, but to gather data on post-transfer outcomes such as subsequent persistence and completion outcomes. The third and most difficult task is driven by the specificity that is possible when considering the IMSO principles: develop systems, both business and human, to transform these new data into useful information. This third task requires effort on the part of the institution. We consider the relative burden this represents in the section "Burden in Outcomes Reporting."

Community-Driven Efforts

Community-driven, foundation-sponsored efforts like the Voluntary Institutional Metrics Project, the Voluntary System of Accountability, and the Student Achievement Measure have been key change agents in contemporary discussions of improving the measurement of student persistence and completion. Similar projects should continue to lead the way, advancing new and creative ideas for strengthening the nation's postsecondary data infrastructure.

As they do, we would urge them to refrain from devising approaches that reduce the information that can be made available to students, educators, and policymakers. We believe this requires approaches that advocate for collecting data on all students for more outcomes, and, potentially, a finer levels of disaggregation by student characteristic or circumstance (e.g., transfer status or financial aid receipt).

This position in no way precludes individual metrics from using those data to report something narrowly tailored that suits audience needs. Every metric does not need to reflect the experience of every student, so long as (1) who is included in its calculation is made transparent, and (2) the data exist to create complementary metrics that can address the experience of students left out. Data must be winnowed down to create information. But if complete data are not collected and maintained from the outset, the capacity for full information is seriously diminished.

Federal Data Collections

Relatively simple changes to existing IPEDS data collections could substantially improve our understanding of student persistence and completion. A particularly promising approach is extending the IPEDS Outcome Measure survey component to include, on an optional basis, information on more than just students' subsequent enrollment at another institution. In particular, we would suggest NCES and IPEDS technical review panelists consider two changes to information collected on student outcomes at the sixth year: enrollment and completion at a subsequent institution. Similar additions could be made to the IPEDS OM component that captures outcomes eight years after entry.

Burden in Outcomes Reporting

Practitioners and policymakers considering any kind of expanded persistence and completion reporting are right to ask about its implication for institutional burden. Institutional research offices, the unit on campus most often tapped to do this kind of work, already are beleaguered with high-priority requests from regulators, trustees, and campus executives. In a zero-sum environment, getting one more thing done often means not doing something else. But having more work does not necessarily translate to more burden. As has been observed elsewhere, a task is unnecessarily burdensome when its cost to complete exceeds its value.

So, how valuable is it to know just how likely *every* student, not just those belonging to select subsets, is to earn a college degree? There is no simple or singular answer, if for no other reason than the value proposition varies depending on who is asking the question.

For an individual student choosing between colleges, the value of that information is money out of pocket, time out of the workforce to complete (or not) a degree, and his or her expected future wages. By some measures, that can amount to nearly $1 million over a lifetime.[17] The psychological cost—what a student feels when he tries to earn a degree but does not succeed—cannot be quantified.

To be clear, when good information about where she or he is likely to be successful can't be placed in the hands of a consumer, it isn't just the learner who loses—it is all of us. Studies have shown that the cost of noncompletion for bachelor's degree–seeking students alone exceeds $4 billion annually, including lost wages and tax revenue.[18] That's before one considers the cost of federal financial aid dollars, be they in the form of grants or loans, which are squandered by non-completion.

For institutions, the answer is somewhat more complex. Having a keener sense as to who succeeds, and knowing more about who faces challenges and when those challenges occur, can be put to a host of uses. At its best, that information can be put to use improving campus practices dedicating to improving retention and ensuring completion. This can decrease recruiting costs, yield reputational benefits, and help institutions capture more budget dollars in states that reward institutional performance.

Of course, the converse is also true: Collecting and reporting more detailed information about retention and completion could lead institutions to take undesirable steps. As we noted previously, some have insinuated institutions can actively manage their IPEDS GR cohorts to improve eventual graduation rates by deferring potentially less-qualified students to the winter or spring term, for example, or admitting them in the fall term in a "special student" status rather than first-time, full-time. A more inclusive system of measurement would stop this practice, but might cause some institutions to conclude that these students should not be admitted under any circumstance.

If the benefits of having improved persistence and completion metrics are relatively clear, understanding their cost is less so. Were a new federal measure to be created, NCES would bear the responsibility—and the cost—of making the requisite changes to IPEDS for its collection. Those changes involve soliciting the technical expertise and opinions of the higher education community, refining survey instruments and associated instructions, and modifying existing data systems. These are far from extraordinary expenses, however. Based on recent information provided to the Office of Management and Budget (OMB), the $8 million cost associated with IPEDS anticipates a continually evolving data collection system.[19]

The most significant cost in weighing the burden associated with improved metrics is institutions' time. According to the same OMB filing just referenced, NCES estimates that each institution spends 16 hours per year complying with reporting activities associated with its current graduation rate surveys, and another 33 hours on the forthcoming OM component. At NCES's estimate of the prevailing hourly cost, $37.15, those six (or so) days of effort work out to a little more than $1,800 per institution annually.

[17] Daly, M.C., & Bengali, L. (2014, May 5). Is it still worth going to college? *Federal Reserve Bank of Chicago*. Retrieved from http://www.frbsf.org/economic-research/publications/economic-letter/2014/may/is-college-worth-it-education-tuition-wages/

[18] Schneider, M, & Yin, L.M. (2011). The high cost of low graduation rates: How much does dropping out of college really cost? *American Institutes for Research.* Retrieved from http://www.air.org/sites/default/files/downloads/report/AIR_High_Cost_of_Low_Graduation_Aug2011_0.pdf

[19] U.S. Office of Information and Regulatory Affairs (n.d.) ICR documents. Retrieved from http://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=201312-1850-001

The principles we have advocated for would no doubt increase the cost of IPEDS reporting. Although burden is certainly in the eye of the beholder, if these changes were to double the cost of persistence and completion reporting (certainly possible) or even quadruple them (seemingly unlikely), we believe the information value they provide students, institutions, and policymakers would be well worth it.

Final Thoughts

We are very near the point when students, educators, and policymakers will have more complete information on the persistence and completion experiences of the nation's college students. The advent of efforts like the IPEDS Outcome Measures Survey and SAM stretch the artificial boundaries of who is and is not included in measurement activities as institutions collect data and report information on outcomes for more students than ever before—certainly more than the current IPEDS Graduation Rate Survey.

But there are still barriers to break. Current approaches to measuring persistence and completion stop short of fulfilling what our research collaborative has identified as a critical goal: making sure the educational pathway of *every* learner is reflected in institutional measures of persistence and completion.

Learners are choosing to pursue postsecondary education in an era where the costs are as high as ever, and the return on that investment remains, to many, murky. Institutions continue to face tight budget forecasts, and state institutions increasingly are subject to outcomes-based funding systems that link allocations to student success. In addition, the nation is striving to meet an educational attainment goal that will restore its international preeminence and secure its economic prosperity. So that each of these actors can be more successful in meeting these private and public challenges, every student attempting to earn a credential—and the role of each institution supporting his or her efforts—deserves counting.

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