A Comparison of Three Completion Reports: National Student Clearinghouse, SAM and IPEDS

Executive Summary

The Integrated Postsecondary Education Data System (IPEDS), the Student Achievement Measure (SAM), and the National Student Clearinghouse (NSC) Research Center all provide measurements of student progress and completion. Important methodological differences, however, lead to different results. Each measurement has strengths and weaknesses that need to be taken into account when interpreting results.

Each report tracks a slightly different cohort of students. The cohort definition used by IPEDS is the most restrictive. The SAM cohort is somewhat more inclusive, while the NSC cohort is the broadest and most inclusive.

IPEDS measures completion at a student’s original institution, while SAM and NSC also account for degree completion at other institutions.

The table below provides the most comparable results from each report side-by-side.

<table>
<thead>
<tr>
<th>Six-year progress and completion data for first-time students starting at Portland State University in Fall 2007</th>
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</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>Graduated: original institution</td>
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<tr>
<td>IPEDS: 42 percent</td>
</tr>
<tr>
<td>Transferred and Graduated: other institution</td>
</tr>
<tr>
<td>n/a</td>
</tr>
<tr>
<td>Enrolled</td>
</tr>
<tr>
<td>n/a</td>
</tr>
<tr>
<td>Not Enrolled, Not Graduated</td>
</tr>
<tr>
<td>n/a</td>
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</tbody>
</table>

Source: National Center for Education Statistics, Student Achievement Measure and National Student Clearinghouse.

IPEDS graduation rates provide a good, universal baseline, but only account for progress and completion at a student’s original institution. By tracking students across institutions, SAM and NSC provide a more complete picture of the complexity that can be involved in pursuing a degree. Both measures have some limitations. SAM completion rates are only available for colleges and universities who voluntarily provide data. NSC publishes aggregate data, but provides national benchmarks and institution-level data only through a voluntary pilot project.

Tracking students across institutions can provide a more complete picture of college persistence and completion. Complex pathways to the degree are becoming increasingly common for today’s students. For students who transfer among institutions, learning obtained at one institution may contribute to degree completion at another. Measures like those provided by SAM and NSC provide a better picture of student pathways than traditional single-institution measures.
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A Comparison of Three Completion Reports: National Student Clearinghouse, SAM and IPEDS

The Integrated Postsecondary Education Data System (IPEDS), the Student Achievement Measure (SAM), and the National Student Clearinghouse (NSC) Research Center all provide measurements of student progress and completion. Important methodological differences between them, however, lead to different results. Each measurement has strengths and weaknesses that need to be taken into account when interpreting their results.

What is each report measuring?

All three reports are, in some manner, attempting to measure student progress and completion among the cohort of first-time students beginning their postsecondary education at Portland State University (PSU) in the fall of 2007. Each report, however, defines the cohort and measures progress and completion differently. In order to fully understand how the measurements relate to one another, we must first establish their respective objectives, cohort definitions, and measurements of progress and completion.

Objectives

**IPEDS:** The National Center for Education Statistics (NCES) is the primary federal entity responsible for collecting and analyzing data relating to education in the United States. NCES houses and maintains IPEDS as “the primary source for data on colleges, universities, and technical and vocational postsecondary institutions in the United States” and provides a variety of ways to access the data, including an online College Navigator tool that allows one to compare institution-level data side-by-side.¹

**SAM** seeks to provide an alternate measurement of student progress and completion by tracking students across postsecondary institutions. Due to an increasingly mobile student population, the usual measures of student progress and completion often underreport student achievement. SAM uses the NSC StudentTracker tool (see below) to provide a more complete picture of student progress and completion within the higher education system.²

**NSC** is responding to the “limitations of institution-based research by focusing on student-level data, tracking the completion of postsecondary certificates and degrees” nationwide.³ Data in the reports were drawn from NSC’s StudentTracker and DegreeVerify services, which track 95 percent of college enrollments nationwide across all postsecondary institutions. These tools (the same utilized by SAM) allow for a longitudinal analysis of an unduplicated headcount of students institutions by linking enrollment records degrees issued.⁴
Defining the cohorts

As mentioned above, each of these measurements tracks the progress and achievement of the cohort of students beginning their postsecondary education at Portland State University in the fall of 2007, but each define that cohort differently.

**IPEDS:** The cohort of students tracked by IPEDS includes “students who began their studies as full-time, first-time degree- or certificate-seeking students” after removing any allowable exclusions, which include students who left the institution due to death or disability, service with the armed forces, service with a foreign aid service, or official church missions.5

**SAM:** The cohort defined by SAM includes “full-time bachelor’s degree-seeking students attending college for the first time.”6

**NSC:** The NSC reports examine “first-time degree-seeking students, of any age” where any student who enrolled half-time or higher at least one term over the period of the study is considered to have shown intent to seek a degree.7

Measuring student progress and completion

**IPEDS** provides four-, six- and eight-year graduation rates (although an eight-year graduation rate is not yet available for the 2007 cohort). Progress and completion must be at the same institution in which the student first enrolled. It also provides transfer-out rates and graduation-rate breakdowns based on gender and race/ethnicity.

**SAM** measures progress and completion across institutions. It provides four-, five- and six-year rates of graduation and enrollment. Since SAM tracks students nationwide, it breaks the cohort into the following categories: graduated from the original institution, transferred and graduated from another institution, enrolled at the original institution, transferred and enrolled at another institution, and current status unknown. In addition to providing data for first-time students, SAM also provides a similar measure for transfer students.

**NSC** tracks progress and completion across institutions and provides six-year outcomes. It calculates the share of the cohort that has completed a degree from the original institution, the share that has completed a degree from a different four-year institution, and the share that has completed a degree from a different two-year institution. These categories are also combined into a total completion rate. In addition, the report also provides the share of students who have not yet earned a degree and are enrolled at any institution, as well as the share who have not yet completed a degree and are not enrolled at any institution. These categories are then broken down by gender, age at first entry, and enrollment intensity (exclusively full-time, exclusively part-time and mixed enrollment). The institution-level data is provided alongside national benchmark comparison tables (in the case of PSU, data was provided for students who started at four-year public institutions nationwide).

How do the methodologies compare?

As the above definitions indicate, these three reports are attempting to measure the same broad concept: student progress and completion. Each report sets out to do so from a different angle and utilizes a unique set of definitions and methodology that ultimately impact the results.

IPEDS provides a universal graduation rate. It seeks to answer the question, what portion of first-time, full-time students have graduated from their original institution after four, six and
eight years? SAM and NSC seek to improve on that measure by tracking progress and completion across institutions in order to provide a more comprehensive picture of today’s complex, fluid postsecondary environment.

The two main methodological variations in these studies are different cohorts and different measures of completion. These differences can shape the results.

**Different Cohorts**

Each measurement begins with a slightly different group of students which it then tracks to examine progress and completion.

The cohort definition used by IPEDS is the most restrictive. It is based on “full-time, first-time degree- or certificate-seeking students.” Due to its restrictive nature, it likely has the highest concentration of “traditional” college students (those graduating high school and entering college shortly thereafter), and reports the highest original-institution completion rate (42 percent).

According to SAM, its cohort utilizes “the same definition as the Student Right to Know graduation rate report in IPEDS.” However, SAM’s total cohort size (1,326 students) and graduation rate at the original institution (40 percent) align with PSU’s posted retention and graduation rates for first-time, full-time freshmen, which use a broader definition of freshmen than IPEDS. If SAM used the narrower IPEDS definition, the original-institution graduation rate would likely increase slightly, as discussed above.

On the other end of the spectrum is NSC. Its cohort definition is the most inclusive. It determines enrollment status over time and across institutions, rather than limiting the cohort by enrollment status during their first term. It includes former dual-enrollment students, which may be excluded from other cohort definitions, depending on the number of credits earned prior to enrolling at PSU.

NSC’s broader definition results in a larger cohort (1,871 students) and likely results in lower overall completion rates. While former dual enrollment students have a higher six-year completion rate nationally, students who did not enroll full-time for their first term are less likely to complete a degree within six years. Nationally, 66 percent of former dual enrollment students graduated within six years, compared to 54 percent for students without previous dual enrollment. Conversely, the total six-year completion rate for students who started at PSU and who were enrolled exclusively part time was just 9 percent, compared to 48 percent for mixed enrollment students and 66 percent for students who enrolled exclusively full-time. Taken together, these factors are likely to result in a lower graduation rate.

**Different Measurements of Completion**

The biggest difference between IPEDS completion rates, on one hand, and the SAM and NSC measures, on the other, is that the former measure progress and completion only at the original institution, while the latter can account for progress and completion across institutions. The ability to track students beyond the original institution will result in higher overall rates of completion and could provide a more complete picture of student progress.

**How do the results compare?**

The table below provides the most comparable IPEDS, SAM and NSC results side-by-side.
A Comparison of Three Completion Reports

Six-year progress and completion data for first-time students starting at Portland State University in Fall 2007

<table>
<thead>
<tr>
<th></th>
<th>IPEDS</th>
<th>SAM</th>
<th>NSC</th>
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<tbody>
<tr>
<td>Graduated: original institution</td>
<td>42 percent</td>
<td>40 percent</td>
<td>34 percent</td>
</tr>
<tr>
<td>Transferred and Graduated: other institution</td>
<td>n/a</td>
<td>11 percent&lt;sup&gt;14&lt;/sup&gt;</td>
<td>14 percent&lt;sup&gt;15&lt;/sup&gt;</td>
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<tr>
<td>Enrolled</td>
<td>n/a</td>
<td>24 percent&lt;sup&gt;16&lt;/sup&gt;</td>
<td>25 percent</td>
</tr>
<tr>
<td>Not Enrolled, Not Graduated</td>
<td>n/a</td>
<td>25 percent&lt;sup&gt;17&lt;/sup&gt;</td>
<td>27 percent</td>
</tr>
</tbody>
</table>

Source: National Center for Education Statistics, Student Achievement Measure and National Student Clearinghouse.

As shown above, the six-year IPEDS graduation rate for students who began their studies at PSU as full-time, first-time degree- or certificate-seeking students in the fall of 2007 is 42 percent.<sup>18</sup>

SAM’s cohort definition results in an original-institution six-year graduation rate of 40 percent. Including the ability to track students across institutions adds another 11 percent who graduated from another institution.<sup>19</sup> Thus, 51 percent of PSU’s 2007 cohort completed a degree.

Coupling the broadest cohort definition with the ability to track students across institutions, NSC arrives at a six-year total completion rate of 48 percent. This includes 34 percent who completed at PSU and 14 percent who completed at another institution.<sup>20</sup> As mentioned earlier, the higher overall completion rate (42 percent) is likely the result of tracking progress across institutions. Conversely, the NSC same-institution completion rate (34 percent) is lower than the IPEDS completion rate, most likely due to the expanded cohort definition and the characteristics of the additional students who are included.<sup>21</sup>

**What are some relative strengths and weaknesses?**

Along with the variations in methodology and results come relative strengths and weakness.

For example, while IPEDS graduation rates provide a good, universal baseline for comparing institutions, they do not have the ability to track progress and completion across institutions and thus do not fully capture the complexity through which a student could complete a degree.

On the other hand, SAM is able to track students across multiple institutions and therefore provides a more complete picture. That tracking ability does not extend to all institutions, however. It is limited to institutional and student data available through the National Student Clearinghouse StudentTracker Cohort Query. While this source does cover the vast majority of college enrollment nationwide, some students will fall through the cracks.<sup>22</sup> Because of this, SAM completion rates are not available for all institutions, but are limited to colleges and universities who voluntarily participate. In Oregon, for example, only four postsecondary institutions currently participate.<sup>23</sup>

Like SAM, the NSC report has the ability to paint a more complete picture of progress and completion by tracking students across multiple institutions. It publishes national reports with aggregate data and also provides national benchmarks and institution-level data to institutions participating in a pilot program. However, national institution-level data is not publically available, making direct comparisons between institutions impossible at this time. Additionally, NSC’s cohort definition is more inclusive than the other measures, and may include more students than one would typically think of when calculating rates of progress and completion.
Conclusion

NSC, SAM and IPEDS all report, among other things, six-year graduation rates for the cohort of students beginning their postsecondary education at Portland State in the fall of 2007. In addition to tracking progress differently, each group uses different cohort definitions. Taking these differences into account helps make sense of the variation in reported graduation rates.

Tracking students across institutions can provide a more complete picture of college persistence and completion. Complex pathways to the degree are becoming increasingly common for today’s students. For students who transfer among institutions, learning obtained at one institution may contribute to a degree at another. Measures like those provided by SAM and NSC provide a better picture of student pathways than traditional single-institution measures.

6 SAM, Methodology for Calculating the Bachelor’s Degree-Seeking Cohort Metric, July 1, 2013, p. 1.
7 NSC, Signature Report #6, Completing Colleges, p. 14.
The posted IPEDS graduation rate is reported by the Oregon University System (OUS) and varies slightly from the rate (40 percent) and cohort definition used by PSU. PSU’s posted rates are based on a cohort of first-time, full-time students beginning in the fall who have less than 30 transfer hours. The IPEDS cohort reported by OUS is a subset of those students. It excludes some students who are more than a few years removed from completing high school and students meeting the IPEDS exclusion criteria (exclusion criteria includes students who left the institution for one of the following reasons: death or total and permanent disability; service in the armed forces (including those called to active duty); service with a foreign aid service of the federal government, such as the Peace Corps; or service on official church missions. See IPEDS Glossary, accessed July 9, 2014). Taken together, these differences in cohort definitions likely account for the slight variation between PSU’s posted graduation rate and IPEDS posted graduation rate.


SAM, Methodology for Calculating the Bachelor’s Degree-Seeking Cohort Metric, July 1, 2013, p. 1.

Former dual enrollment students are defined as “first-time college students in the fall 2007 who had previously taken dual enrollment courses or courses that earned both high school and college credit” and are identified as those whose postsecondary enrollment or degree record prior to fall 2007 occurred before the student turned 18 years old. SAM, Methodology for Calculating the Bachelor’s Degree-Seeking Cohort Metric, July 1, 2013, p. 1.

NSC, Signature Report #6, Completing Colleges, p. 22.

Includes graduates with bachelor’s degrees (9 percent) and associate degrees (2 percent).

Includes graduates of other four-year (11 percent) and two-year institutions (3 percent).

Includes students who are enrolled at the original institution (13 percent) and those who are enrolled at another institution (11 percent).

SAM describes this category as “current status unknown.”


For purposes of comparison, adding SAM’s graduated from the original institution (40 percent) and transferred and graduated from another institution (11 percent) categories results in an overall completion rate of 51 percent.


For example, some international students without social security numbers may not be able to be matched. However, SAM estimates that for most institutions more than 95 percent of the cohort can be matched through the Clearinghouse. See SAM, Methodology for Calculating the Bachelor’s Degree-Seeking Cohort Metric, July 1, 2013, pp. 2-3.

The four Oregon institutions with data currently available are Oregon State University, Portland State University, Southern Oregon University and the University of Oregon. To find participants in other states, please see Student Achievement Measure, Participants, accessed July 22, 2014.