Where Do They Really Go? And How Can We Know?

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Purpose of this White Paper
The president of James Madison University asked Institutional Research to prepare a white paper to answer questions that arose from Virginia’s General Assembly Members related to performance and graduation rates of college students.

Problem Statement
Currently, university graduation rates reported by colleges and universities to the federal government and college guides only measure first-time freshmen who start and finish at a single institution. This can be misleading in that the rates do not reflect the many students who transfer and graduate with a degree from another college or university. The purpose of this paper is to demonstrate how use of data from the National Student Clearinghouse can help tell a more complete story of how our freshmen persist and graduate, whether it be at their initial institution of record or at another subsequent university. For ultimately, if a student earns a degree, then higher education as a system has indeed succeeded.

Introduction
Sir Arthur Conon Doyle once said:

“I never guess. It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.”

Consistent with Sir Arthur’s assertion, policy decisions should be based upon the most accurate and informative data. This is especially true as policies and targets are considered to improve student retention and graduation rates at Virginia’s higher education institutions. Use of incomplete data results in underestimates of the actual retention and graduation rates and may lead to inappropriate conclusions about how well Virginia taxpayers’ funds are used.

The graduation and retention rates of students who enter higher education institutions have been discussed frequently in the last few years in the press and in political arenas. Currently, the retention and graduation rate statistics for first-time, full-time freshmen have been widely used for measuring the institution’s quality and productivity. Graduation and retention rates are a significant predictor (25 percent for U.S. News) of where colleges and universities will be ranked in national publications1.

In the last decade changes in student migration patterns demonstrate that more and more students apply to multiple institutions. This implies that students are favorably disposed to more than one institution, and it is common for them to switch institutions if the initial institution for some reason is not a good fit. At James Madision University the percentage of students who said they

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applied to five or more institutions increased over a ten-year period from approximately 25 percent to more than 40 percent\(^2\). According to a study published by the National Center for Education Statistics\(^3\), a large percentage of students attend more than one institution.

“As of 2001, 40 percent of students who enrolled in postsecondary education for the first time in 1995–96 had attended more than one institution. Over the course of the undergraduate education of 1999–2000 college graduates (first-time bachelor’s degree recipients), a majority (59 percent) had attended more than one institution.”

More Complete Graduation and Retention Rates

So how can more complete graduation and retention rates be calculated for undergraduates enrolled as first-time, full-time freshmen in Virginia’s higher education institutions? Current research using federal (IPEDS) data significantly undercount the number and percentage of students who are retained and graduate at either their first institution or another institution. A research study published in fall 2010 by the American Institutes for Research (AIR, not to be confused with the Association for Institutional Research) concluded that:

”. . . we continue to spend far too much money on students who don't even finish the first lap, let alone fail to cross the finish line.”

"When students enroll in a college or university and drop out before the second year, they have invested time and money only to see their hopes and dreams of a college degree dashed. These costs can be heartbreaking for students and their families, but the financial costs to states are enormous."

The American Institutes for Research estimated that Virginia annually spends $177.7 million on students who drop out after their first year\(^4\).

The major problem with this research is that retention and graduation rates are calculated for first-time, full-time freshmen that remain at their first institution, not those who, for one reason or another, transfer to another institution and graduate in a timely manner (this limitation was noted by the AIR researchers). IPEDS data do not include the number of students who switch institutions and eventually graduate. This is an extremely common occurrence in higher education, especially for urban institutions and first-generation students. Another major problem with the conclusions by AIR is their assertion that students who do not return to their initial institution have “their hopes and dreams of a college degree dashed.” This statement cannot be verified given the limitations of the IPEDS data.

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\(^2\) First-Year Student Survey, annually conducted by the James Madison University Office of Institutional Research.

\(^3\) The Road Less Traveled? Students Who Enroll in Multiple Institutions, National Center for Education Statistics, 2005.

\(^4\) Finishing the First Lap: The Cost of First-Year Student Attrition in America’s Four-Year Colleges and Universities, American Institutes for Research, October 2010.
A recent article in the Chronicle of Higher Education\(^5\) stated that:

“The graduation rate excludes students who transfer to other colleges and earn degrees there. It also omits students who transfer in and graduate. By one estimate, the rate ignores up to 50 percent of all enrolled students.”

Until recently it was impossible to track student retention and migration within the vast majority of American higher education institutions. The U.S. does not have a national higher education database for tracking student migration throughout the diverse American higher education community. Many states, like Virginia, have statewide data systems that can be used to track student migration within the state, but are unable to track students who leave the Commonwealth to enroll in institutions in other states. The National Student Clearinghouse, based in Herndon, Virginia, collects student-specific enrollment and graduation data from more than 93 percent of students in higher education. The data collected by the Clearinghouse may be a means to improve the calculations of the retention and graduation rates for the Virginia institutions.

**Why Do Students Leave Institutions Prior to Graduation?**

Students leave institutions for various reasons, many of which are beyond the institution's control. Some students, for one reason or another, are unable to perform well in the classroom. Higher education institutions seek to enroll students who have the best opportunity to do well, but there are personal factors and behaviors that admissions officers cannot judge for each student, such as persistence and maturity, that result in poor grades.

Many students, especially those at urban institutions, are older and have to juggle work, family and studies. These students typically take more years to graduate than students in institutions that attract the typical 18 to 22-year-old student.

High school counselors, college guides, and parents frequently encourage students to apply to:

1) a “reach school” that they may wish to attend, but where it is questionable that he/she will be admitted;
2) schools at which their previous academic performance should qualify them (“almost certain”) for admission; and
3) a “safety school” to which they are most confident they can be accepted.

It is common for students to end up enrolling in a "safety school" because they were not accepted into their “reach” or “almost certain” school. At JMU more than 20 percent indicated that JMU was their 2\(^{nd}\), 3\(^{rd}\) or lower choice. More than 50 of these students transferred to their first-choice institution and graduated on time. Most of the time the students end up liking the “safety school” and graduate. In the conclusions of the AIR study these students had “their hopes and dreams of a college degree dashed.”

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\(^5\)“Graduation Rates Fall at One-Third of 4-Year Colleges,” Brainard, Jeffrey and Fuller, Andrea, Chronicle of Higher Education, December 5, 2010
Some students are unable to continue their education for financial reasons. Publicly-supported institutions have been forced to raise tuition significantly in the last few years as appropriations from state and federal sources have dramatically declined. These tuition and fee increases are especially difficult for students who come from underrepresented populations, resulting in them having unsustainable debt loads. Many opt to attend a less expensive option like a local community college near their home and then transfer to a four-year institution that may also be near their home.

Some students leave their first institution for personal reasons, including illness or family issues. Frequently they will end up at an institution near their home after these issues have been resolved.

Sometimes an institution is not a good fit personally or academically. The student may have roommate issues, not find groups or organizations that fit their needs, or a myriad of other reasons that make the institution a poor fit for him or her. The typical 18-year old student frequently is uncertain what he/she wants to study. They may enroll in an institution they believe offers the degrees or fields of study they wish to pursue, only to discover that they do not like or do well academically in that major and want to do something else. Sometimes the "something else" is offered at another institution.

The purpose of this white paper is to: fully recognize all the students who matriculated and graduated after enrolling at JMU; explain the misunderstandings about quality that arise for institutions when their retention and graduation rates are significantly miscalculated; explain why and how these rates are undercounted; and, finally, propose a method to more accurately calculate and report these rates.

**The Problem**

Because the real graduation and retention rates for students who enter Virginia's higher education system are not captured in federal and state datasets, policy recommendations based on these data may be less useful than they could be. Based on studies conducted by JMU and several institutions across the country, reports of retention and graduation rates of students who enter higher education institutions as first-time freshmen, using federal reporting methods, significantly undercount the true number and percentage of students who are retained and graduate.

At one public urban four-year institution outside of the Commonwealth (but with a profile similar to several Virginia public institutions) the percentage of students who graduated in six years was 54.1 percent. However, further analysis using data from the National Student Clearinghouse found that 65.9 percent had earned a bachelor’s or associate’s degree within six years. Another 14.4 percent were still pursuing a degree. Overall, 80.3 percent had either obtained a degree or were still pursuing a degree. This finding was common among public institutions across the nation.

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6 Data from College Portraits: [http://www.collegeportraits.org/NC/UNCC/tracker](http://www.collegeportraits.org/NC/UNCC/tracker)
This undercounting may result in false conclusions about:
- How well students are prepared for college;
- The quality of instruction at various institutions;
- The uses of taxpayers’ money at these institutions; and
- The investment of students and parents in higher education.

Another significant issue is that only about half of all students who enroll in higher education in Virginia are first-time, full-time students. At this time there are no outcome data on what happens to students who enroll part-time or as transfers. For many of the Virginia institutions, these part-timers and transfers constitute a significant portion of their entire enrollment.

Proposed Solution
How can data be collected that shed more light on the patterns of student migration, retention, and graduation within Virginia's higher education institutions or at institutions outside the Commonwealth?

Clifford Adelman, a former senior research analyst for the U.S. Department of Education, and now a senior associate at the Institute for Higher Education Policy, recommended in a report from the American Council on Education that:

"Congress should also ask all institutions to make a good faith effort to find the students who left their school and enrolled elsewhere to determine whether these students, too, graduated."  

The National Student Clearinghouse, a non-profit organization based in Herndon, Virginia, is a repository of data supplied each term on at least 93 percent (99 percent for students enrolled in public institutions) of students enrolled in higher education. According to its website:

"The National Student Clearinghouse, a non-profit organization, is the nation's trusted source for student degree and enrollment verification. Through our verification reporting solutions, we help educational institutions improve efficiency, reduce costs and workload, and enhance the quality-of-service they provide to their students and alumni, lending institutions, employers, and other organizations. All of our programs are designed to reduce administrative burden of providing educational record verification for our participating schools while maintaining the confidentiality and privacy of records in our care in full compliance with the Family Educational Rights and Privacy Act (FERPA)."

The Clearinghouse was initially formed to help institutions and financial aid organizations track the movement of students across institutions.

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8 National Student Clearinghouse website: [http://www.studentclearinghouse.org/colleges/Tracker/default.htm](http://www.studentclearinghouse.org/colleges/Tracker/default.htm)
StudentTracker is a service offered by the Clearinghouse to member institutions that might prove useful to the Virginia higher education institutions in tracking the outcomes of students that leave their institution prior to graduation. According to the Clearinghouse’s website,

“StudentTracker puts the Clearinghouse's comprehensive student records data at your fingertips. Officials across your campus can use it to perform all types of educational research and analyses – quickly, easily and affordably. Through StudentTracker, you can tap into the nation's largest database of enrollment data – the only one of its kind. You'll have immediate access to our database covering more than 100 million current and former students, continually updated to ensure the greatest accuracy.”

Higher education institutions can upload to StudentTracker a list of students that they wish to discover if and where they transferred and graduated. These uploaded data are linked by the Clearinghouse to enrollment and graduation data that have been supplied by more than 2,600 institutions (every 30 to 40 days) on more than 93 percent of students enrolled in higher education across the country.

These linked data are downloaded by the institution and can be matched to the institution’s student demographic data and used to calculate more robust retention and graduation rates for students who first enrolled or transferred to their institution. Although there are cautions that must be considered when using Clearinghouse data (participation is voluntary, not all institutions participate fully in providing data, and not all institutions who do participate provide data on certificate completers), these data are likely to be the best available source of information on the outcomes of students who left the Commonwealth prior to graduation.

Adelman, making suggestions about where higher education institutions can track student migration and graduation, stated that:

“The National Student Clearinghouse will help in many of these cases, the Consortium for Student Retention Data Exchange (CSRDE) will help in others, state higher education system offices will help in still others, and we might even get the interstate compacts (e.g., the Western Interstate Commission on Higher Education) into the act.”

Each higher education institution in Virginia is encouraged to use StudentTracker, SCHEV, and if necessary, one of these other sources to track students who leave their institution and transfer to another Virginia or non-Virginia institution. For the Virginia institutions, the Clearinghouse will likely provide the most complete data on students earning an associates or bachelors degree outside of the Commonwealth. The Virginia institutions will be encouraged to develop and use a common template to report the transfer and graduation rates of all students.

It is also possible to report the outcomes of transfers to the institution producing the report. For example, JMU would calculate the retention and graduation rates of transfers to JMU. Retention and graduation rates of first-time, full-time freshmen and transfers will be reported to SCHEV on a biennial basis.
Each institution negotiates with SCHEV annual targets for retention and graduation rates as part of the Institutional Performance Standards (IPS). The data collected by each institution on the outcomes of students who leave their institution, either through StudentTracker or another database, could be presented as additional data along with the IPS targets and outcomes. It will also allow the institutions to report outcome statistics on other cohorts of students like part-timers and transfers.

Conclusion

It is essential that policy recommendations be based upon the most complete and accurate data. Currently the federal IPEDS data on retention and graduation rates are incomplete because they do not include data on students who transfer to other institutions. The IPEDS data focus only on the outcomes of nearly 50 percent of undergraduates who enter higher education. Studies conducted by many higher education institutions have conclusively shown that the graduation and retention rates of students who enter their institutions are consistently higher than the IPEDS data.

There is now a credible way to collect more complete data on student migration and graduation both within the Commonwealth and to other states. The National Student Clearinghouse’s StudentTracker program allows institutions to match cohort data to data reported to the Clearinghouse on more than 93 percent of students who attend higher education institutions. The Clearinghouse staff estimate that 99 percent of students attending public institutions are included in their data. While not perfect, the calculations of retention and graduation statistics should be more complete and robust using StudentTracker data.

All Virginia higher education institutions are encouraged to annually partner with the Clearinghouse to obtain student-specific data on former students, and use these data to generate retention and graduation statistics. They will be encouraged to report annually these data in a common format to SCHEV.
### Institutional Graduation and Retention Rates

**James Madison University**  
**Fall 2005 First-Time Freshmen**

<table>
<thead>
<tr>
<th>Cohort Year (first-time, full-time): fall 2005</th>
<th>Total Cohort (VA and Non-VA)</th>
<th>Virginia Resident</th>
<th>Non-Virginia Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Head-count</td>
<td>Percent of Cohort</td>
<td>Head-count</td>
</tr>
<tr>
<td>Cohort headcount</td>
<td>3,796</td>
<td>2,402</td>
<td>1,394</td>
</tr>
<tr>
<td>Retained after one year at JMU</td>
<td>3,484</td>
<td>2,227</td>
<td>1,257</td>
</tr>
<tr>
<td>Graduated within 150 percent of accepted graduation time from JMU</td>
<td>3,089</td>
<td>1,981</td>
<td>1,108</td>
</tr>
<tr>
<td>Total transferred (institution appearing first in any term after leaving first institution)</td>
<td>424</td>
<td>222</td>
<td>202</td>
</tr>
<tr>
<td>Transferred to another Virginia institution (based on first institution appearing in any semester after first (fall 2005) term)</td>
<td>193</td>
<td>178</td>
<td>15</td>
</tr>
<tr>
<td>Transferred to a non-Virginia institution (based on first institution appearing in any semester after first (fall 2005) term)</td>
<td>231</td>
<td>44</td>
<td>187</td>
</tr>
<tr>
<td>Transferred and graduated within 150 percent of accepted graduation time (not from JMU)*</td>
<td>277</td>
<td>135</td>
<td>142</td>
</tr>
<tr>
<td>Graduated from Virginia institution other than JMU.</td>
<td>119</td>
<td>111</td>
<td>8</td>
</tr>
<tr>
<td>Graduated from non-Virginia institution</td>
<td>158</td>
<td>24</td>
<td>134</td>
</tr>
<tr>
<td>Total retention Fall '05 to Fall '06 at JMU or other institution</td>
<td>3,693</td>
<td>2,344</td>
<td>1,349</td>
</tr>
<tr>
<td>Total graduation (Bachelors) within 150 percent of accepted graduation time at JMU or other institution.</td>
<td>3,396</td>
<td>2,135</td>
<td>1,261</td>
</tr>
<tr>
<td>Postbaccalaureate degrees earned (Masters or Doctoral)</td>
<td>509</td>
<td>326</td>
<td>183</td>
</tr>
</tbody>
</table>

*Additional notation on the query methods. All NON-JMU degrees/attendance used above are those that are during or after the final JMU semester listed, be it a non-graduate last-attendance date, or a graduate graduation date. Postbaccalaureate degrees are those earned anywhere. The unit of analysis is the person (in the pattern used in GRS), not the degree.

Sources: JMU Institutional Research historical data files; Student Tracker  
Completed January 2012
### Institutional Graduation and Retention Rates

**James Madison University**

**Fall 2004 First-Time Freshmen**

<table>
<thead>
<tr>
<th>Cohort Year (first-time, full-time): fall 2004</th>
<th>Total Cohort (VA and Non-VA)</th>
<th>Virginia Resident</th>
<th>Non-Virginia Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort headcount</td>
<td>3,285</td>
<td>2,225</td>
<td>1,060</td>
</tr>
<tr>
<td>Retained after one year at JMU</td>
<td>2,983 90.8%</td>
<td>2,040 91.7%</td>
<td>930 87.7%</td>
</tr>
<tr>
<td>Graduated within 150 percent of accepted graduation time JMU</td>
<td>2,706 82.4%</td>
<td>1,847 83.0%</td>
<td>859 81.0%</td>
</tr>
<tr>
<td>Total transferred (institution appearing first in any term after leaving first institution)</td>
<td>442 13.5%</td>
<td>278 12.5%</td>
<td>164 15.5%</td>
</tr>
<tr>
<td>Transferred to another Virginia institution (based on first institution appearing in any semester after first (fall 2004) term)</td>
<td>232 7.1%</td>
<td>221 9.9%</td>
<td>11 1.0%</td>
</tr>
<tr>
<td>Transferred to a non-Virginia institution (based on first institution appearing in any semester after first (fall 2004) term)</td>
<td>210 6.4%</td>
<td>57 2.6%</td>
<td>153 14.4%</td>
</tr>
<tr>
<td>Transferred and graduated within 150 percent of accepted graduation time (not from JMU)</td>
<td>262 8.0%</td>
<td>146 6.6%</td>
<td>116 10.9%</td>
</tr>
<tr>
<td>Graduated from Virginia institution other than JMU.</td>
<td>110 3.3%</td>
<td>105 4.7%</td>
<td>5 0.5%</td>
</tr>
<tr>
<td>Graduated from non-Virginia institution</td>
<td>152 4.6%</td>
<td>41 1.8%</td>
<td>111 10.5%</td>
</tr>
<tr>
<td>Total retention Fall ’04 to Fall ’05 at JMU or other institution</td>
<td>3,193 97.2%</td>
<td>2,168 97.4%</td>
<td>1,025 96.7%</td>
</tr>
<tr>
<td>Total graduation (Bachelors) within 150 percent of accepted graduation time at JMU or other institution.</td>
<td>2,968 90.4%</td>
<td>1,993 89.6%</td>
<td>975 92.0%</td>
</tr>
<tr>
<td>Postbaccalaurate degrees earned (Masters or Doctoral)</td>
<td>454 13.8%</td>
<td>303 13.6%</td>
<td>151 14.2%</td>
</tr>
</tbody>
</table>

Sources: JMU Institutional Research historical data files; Student Tracker
Completed June 2011