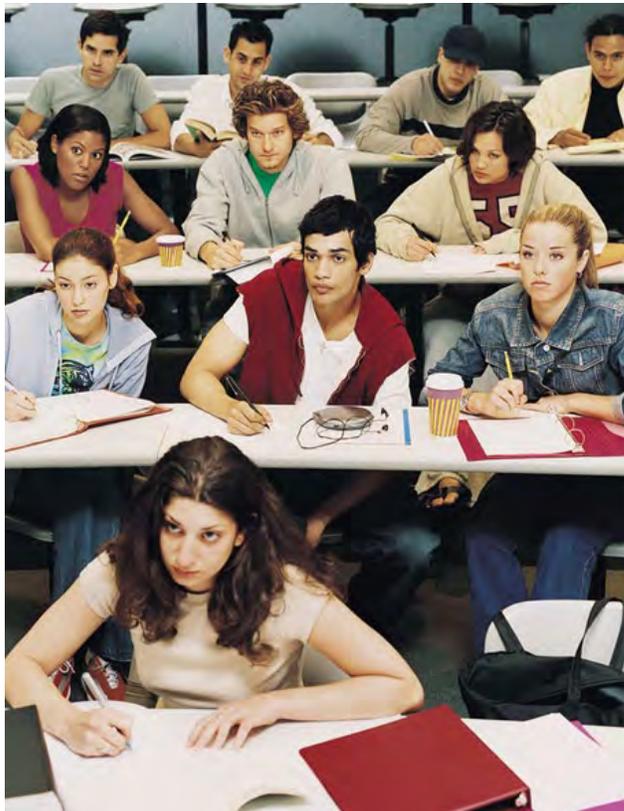




AMERICAN INSTITUTES FOR RESEARCH®



The Hidden Costs of Community Colleges

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Executive Summary

Community colleges are an essential component of America's higher education system. Last year, they enrolled well over 6 million students, a number that continues to grow. Community colleges also are essential to meeting the Obama administration's goal of having the United States regain its position as the nation with the highest concentration of college-educated adults in the world. Labor force data show that many of the certificates and associate's degrees awarded by community colleges generate significant returns on the investment that students and taxpayers make in these institutions. And compared to the costs of attending a bachelor's degree-granting institution, attending a community college is usually far less costly to the student.

Therefore, it is not surprising that community colleges now earn a high level of attention and

respect from policymakers across the country. However, not everything is rosy. This report focuses on the high costs of the low retention and completion rates that are far too typical of community colleges.

Community colleges have multiple missions, and their performance ultimately needs to be evaluated on multiple metrics. However, one key mission of community colleges is the awarding of associate's degrees and certificates to students who enroll with the intention of earning these credentials. Focusing on only first-time, full-time, degree- and certificate-seeking students in community colleges and using data from the U.S. Department of Education, this report shows that community colleges are generating costs to the taxpayer that are usually not part of the discussion of their role in America's system of higher education.

During the last five years, spanning the 2004–05 academic year through the 2008–09 academic year (the last year for which comparable data are now available) and counting only first-time, full-time, beginning degree- or certificate-seeking students included in federal statistics:

- State and local governments appropriated close to \$3 billion to community colleges to help pay for the education of students who did not return for a second year.
- States spent more than \$240 million in student grants to support students who did not return to their community college for a second year.
- The federal government spent approximately \$660 million in student grants to support students who did not return to their community college for a second year.
- In total, almost \$4 billion in federal, state, and local taxpayer monies in appropriations and student grants went to first-year, full-time, community college students who dropped out.

Given the central role that community colleges play in the nation’s plans to regain its position as the number one country in the world when it comes to college-educated adults, and given the increasing fiscal difficulties facing individual states and the nation as a whole, it is clear that “business as usual” is far too expensive. Better ways are needed to ensure that the students who enter a community college expecting to earn an associate’s degree or a certificate finish the first lap and ultimately cross the finish line.

Data on individual campuses and comparative tools to explore these and other measures of community college performance are available through CollegeMeasures.org at <http://www.collegemeasures.org>. An interactive map with state results can be found at <http://www.collegemeasures.org/ccattrition>.

Introduction

Community colleges are an essential part of America’s system of higher education. They award certificates and two-year degrees; they provide transfer pathways into four-year baccalaureate programs; and they provide a venue for adult learners wishing to brush up on skills or to learn more about topics that interest them. Community colleges also enroll large numbers of students at relatively low tuition. This low price plus their open-access policies make them especially important to the task of educating the growing number of low-income and racial- or ethnic-minority students now seeking the benefits of postsecondary education.

The importance of community colleges is reflected in their enrollments, which increased by about 25 percent during the last decade and now top more than 6 million students. In addition to these already substantial enrollments, President Obama has called for 5 million more community college graduates by the year 2020—a challenging and difficult task.

Despite their contributions, community colleges have long been neglected by federal higher education policy, and community college leaders have long been accustomed to being disappointed by Washington politicians.¹ As President Obama noted at his American Graduation Initiative speech in July 2009, “All too often, community colleges are treated like the stepchild of the higher education system; they’re an afterthought, if they’re thought of at all.”² But in the last few years, things have changed.

Community colleges now receive far more attention than ever, and along with the new attention has come new money from the federal government and from large private foundations, especially the Bill & Melinda Gates Foundation and the Lumina Foundation. Today, community colleges are no longer “afterthoughts” but are key to achieving the Obama

1 See David Moltz’s article “Hope Amid Disappointment” in the March 16, 2010, issue of *Inside Higher Ed* at <http://www.insidehighered.com/news/2010/03/16/agi/>.

2 President Obama’s remarks on the American Graduation Initiative, delivered on July 14, 2009, are available at http://www.whitehouse.gov/the_press_office/Remarks-by-the-President-on-the-American-Graduation-Initiative-in-Warren-MI/.

administration's pledge to make the United States once again the nation with the highest concentration of adults with postsecondary education in the world.³

To achieve this goal, the Obama administration has put forward a series of ambitious ideas. In July 2009, President Obama announced an American Graduation Initiative calling for spending close to \$12 billion to improve the performance of community colleges, with most of that money designed to improve the quality of academic programs and raise graduation rates. Although this proposal was ultimately left on the cutting floor during final negotiations over the Student Aid and Fiscal Responsibility Act (SAFRA), \$2 billion of additional aid to community colleges was saved.

Despite this setback, the Obama administration continues to emphasize the importance of community colleges in producing the millions of new graduates the nation needs. In September 2010, President Obama held a "first-ever" summit—calling together community college leaders, researchers, business executives, and philanthropists—to highlight the importance of community colleges. At the summit, the Bill & Melinda Gates Foundation announced a \$35 million Completion by Design⁴ program to improve community college performance, and the Aspen Institute announced a \$1 million prize for Community College Excellence,⁵ with the first award to be announced in the fall of 2011. The Aspen Institute and its funding partners created the prize because they believe that "community colleges are a critical linchpin in America's efforts to educate our way to greater prosperity and equality. If the U.S. is to regain a leadership position in postsecondary

education and economic growth, community colleges must be a big part of the solution."⁶

The Hidden Costs of Low Retention Rates in Community Colleges

During the last five years, the number of first-time, full-time, degree- or certificate-seeking community college students has been increasing. In 2009, more than 800,000 of these students stood at the starting gate—but far too many will fail to cross the finish line, and far too few will even finish the first lap.

To determine the hidden costs of low retention rates in community colleges, we conducted this study of community college retention rates in the United States for the five-year period spanning the 2004–05 through the 2008–09 academic years. Taking into account transfers, in every year we studied, about one fifth of full-time students who began their studies at a community college did not return for a second year. These students have paid tuition, borrowed money, and changed their lives in pursuit of a degree they will likely never earn.⁷ And taxpayers have invested a significant (and growing) number of tax dollars in the form of state appropriations and grant funding as these students pursue a credential but drop out during the first lap. Our data show that in the 2008–09 academic year, nearly \$1 billion of taxpayer money was spent on first-time, full-time, community college students who dropped out before their second year—an amount that is up by more than 35 percent from five years ago.

In this report, we look more intensively at the size of taxpayer investments in degree- or certificate-seeking community college students who do not return for a second year. We report these costs nationwide and within individual states. We take into account the fact that one of the missions of community colleges

3 President Obama's February 2009 address to Congress is available at http://www.whitehouse.gov/the_press_office/Remarks-of-President-Barack-Obama-Address-to-Joint-Session-of-Congress/.

4 Information on Completion by Design is available at <http://www.completionbydesign.org/>.

5 Information about the Aspen Prize for Community College Excellence is available at <http://www.aspeninstitute.org/policy-work/aspen-prize/about/>.

6 The Aspen Prize for Community College Excellence overview is available at <http://dl.dropbox.com/u/27262972/AspenCCPrizeOverview.pdf>.

7 According to Beginning Postsecondary Survey (BPS) data, for students who dropped out of community colleges, only about 1 percent of them attained a degree by year six.

is to help students transfer to four-year colleges, adjusting estimates of the number of first-year dropouts for transfer students.⁸ (Costs broken out for each campus, and for both public and private schools, are available online through reporting tools developed by CollegeMeasures.org at <http://www.collegemeasures.org>.)

There is an ongoing debate about why community colleges have such low success rates with their students. One part of the explanation for low success rates has to do with the difficulty of educating the many students who enroll in community colleges but might not be college-ready. Another part has to do with the lack of knowledge about what works for whom in remedial education as well as other education programs. Still another part of the explanation has to do with the lack of support services that community colleges offer.⁹ The list goes on.¹⁰

Although we do not contribute to this body of research, our data suggest that all stakeholders need to pay far more attention to the high costs of

8 Institutions whose mission includes “substantial preparation for students to enroll in another eligible institution without having completed their programs” are required to report to the U.S. Department of Education’s Integrated Postsecondary Education Data System (IPEDS) the number of students who transfer out. However, there is no clear definition of this key term, leaving institutions to decide for themselves whether this is part of their mission. We used the transfer-out numbers reported by community colleges themselves to adjust the number of first-year dropouts. Institutions that have chosen not to report these numbers were not “credited” with these transfer students, since we had no way of knowing how many students have transferred. (For more details, see the Technical Appendix on pages 16–17.)

9 For example, in a 2010 report, ACT found that more than 40 percent of the community colleges responding to its survey have no one responsible for coordinating retention efforts and more than half have no goals related to first-year student retention. See *What Works in Student Retention?* at <http://act.org/research/policymakers/pdf/droptables/CommunityColleges.pdf>.

10 The Community College Resource Center at Teachers College, Columbia University, is arguably the single best repository of what is known about student success in community colleges. This center traces low student success rates to overly complicated bureaucratic structures that students must navigate; limited engagement of faculty in policies and practices to increase student success; poor alignment of course curricula, outcomes, and assessments; low standards; and poor practices concerning collection and use of data to inform a continuous improvement process. See the center’s summary statement at <http://csrc.tc.columbia.edu/Publication.asp?uid=845>.

the low community college retention and completion rates. Simply saying that the nation needs more community college graduates and continuing to pump more money and more students into the existing system is not the answer. Indeed, during the last five years, as more and more students have entered community colleges seeking associate’s degrees and certificates, completion rates have fallen and the hidden costs of community colleges have continued to rise.

How Much Does First-Year Attrition From Community Colleges Cost Taxpayers?

Figure 1 presents an estimate of the state and local appropriations spent on first-time, full-time, degree-seeking students who enrolled in community colleges across the nation but did not return for a second year or transfer to another campus.

We tracked these numbers over the last five years, ending with the last year for which the federal government has reported comparable numbers through the U.S. Department of Education’s Integrated Postsecondary Education Data System (IPEDS).¹¹ In the 2004–05 academic year, state and local governments appropriated more than \$500 million for full-time community college students who dropped out before their second year. This number has increased every year, to more than \$650 million in the most recent year for which we have data—an increase of almost a third.

Figure 2 shows another avenue by which taxpayers are spending money on community college students who subsequently drop out. The federal government underwrites the education of many community college students through grants, mostly Pell Grants. Earlier in the five years we studied, the federal government spent between \$110 million and \$120 million on grants to students who dropped out during

11 We define *community colleges* as U.S.-based, two-year, degree-granting public institutions. Using IPEDS, we identified 1,058 institutions for this study. The Technical Appendix describes how we arrived at our estimates of dropouts.

Figure 1. State and Local Appropriations to First-Year Community College Students Who Subsequently Dropped Out

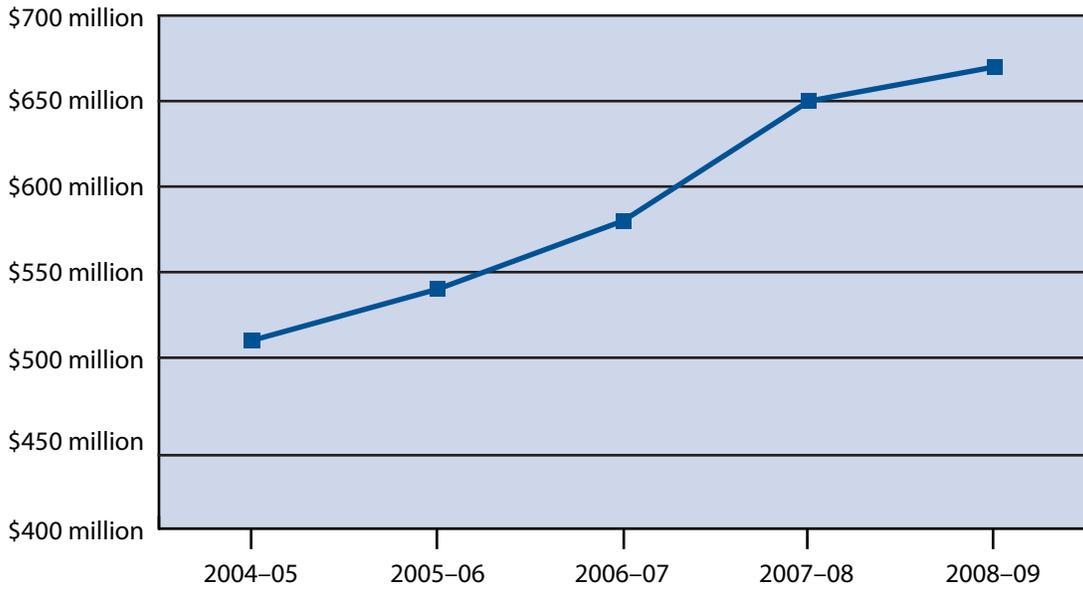
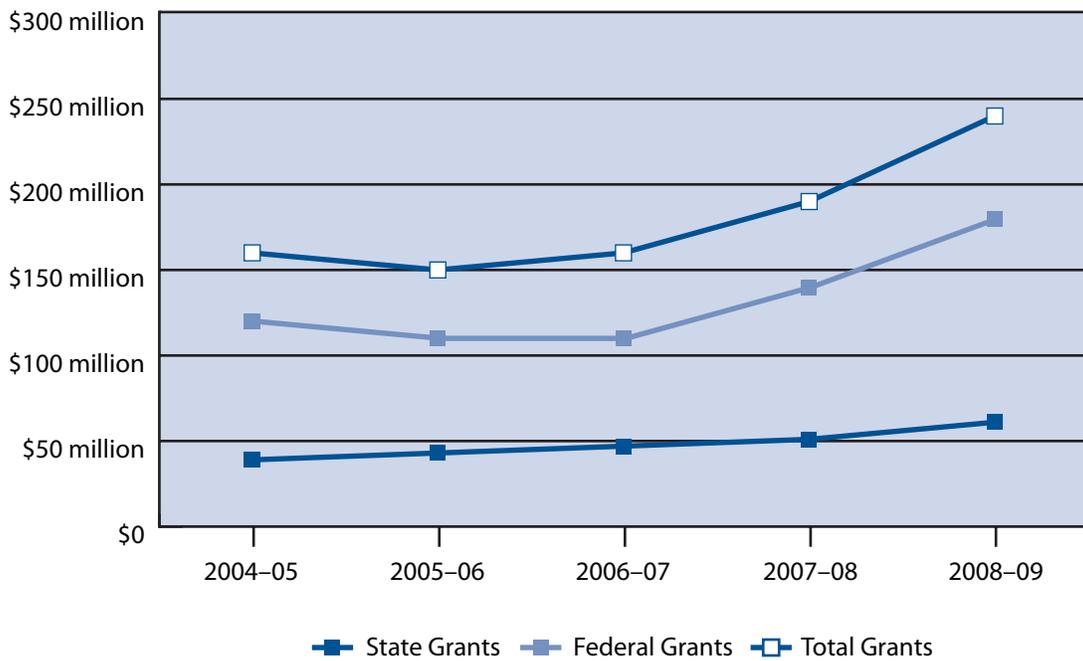


Figure 2. Government Grants to First-Year Community College Students Who Subsequently Dropped Out



their first year of community college. Toward the end of the Bush administration and continuing through the Obama administration, the Pell Grant program expanded dramatically. In the 2007–08 academic year, Pell Grants to first-year community college dropouts soared by about 25 percent from previous years, to about \$140 million, increasing by more than 25 percent to \$180 million in the 2008–09 academic year.

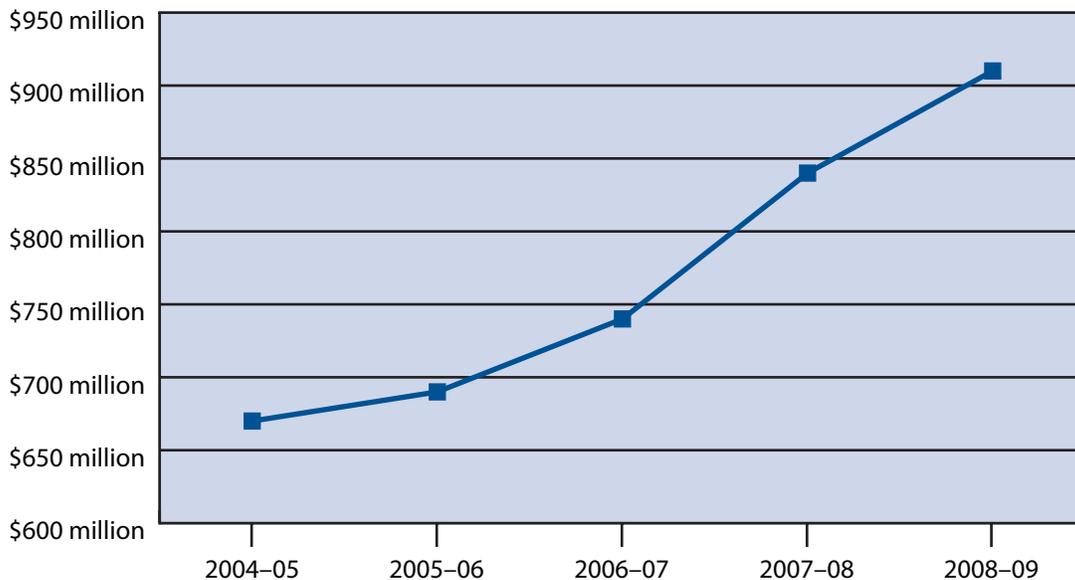
States also have student grant programs. Although these programs are smaller than the federal government's, state grant programs have grown substantially during the five-year time period for which we have data. As these grant programs have grown, so has the amount of money spent on first-year community college dropouts: from \$39 million in the 2004–05 academic year to more than \$60 million in 2008–09.

When we add together both sources of government student grants, the nation's taxpayers are now spending about \$240 million per year on grants to community college students who leave before their second year.

In Figure 3, we combine these appropriations and student grants to estimate taxpayer losses in these sources of community college revenues. In the 2008–09 academic year, the nation's taxpayers spent more than \$900 million on full-time, degree-seeking community college students who dropped out during their first year, a sizable increase from the \$660 million spent five years earlier.

Remember, this is just a piece of the taxpayer cost, since our estimates do not cover part-time students or other government monies (for example, capital expenditures) that help support community colleges.

Figure 3. Total Costs of First-Year Community College Students Who Subsequently Dropped Out



The Cumulative Costs of Failure

So far, we have looked at these losses on an annual basis. In Table 1, we show the cumulative costs during the last five years:

- State and local governments appropriated close to \$3 billion to community colleges to help pay for the education of full-time, degree-seeking students who did not return for a second year.
- States spent more than \$240 million in additional money in student grants to support full-time students who did not return to their community college for a second year.
- The federal government spent approximately \$660 million in student grants to support full-time students who did not return to their community college for a second year.
- In total, almost \$4 billion in federal, state, and local taxpayer monies in appropriations and student grants went to first-year community college dropouts.

Table 1. Five-Year Costs for First-Year, Full-Time, Community College Students Who Subsequently Dropped Out: 2004–05 Through 2008–09 Academic Years

Total Appropriations	Total State Grants	Total Federal Grants	Total Costs
\$2.95 billion	\$241 million	\$660 million	\$3.85 billion

State Results

Although the federal government has made a big investment in community colleges, state and local government investments are far bigger. And while federal grants to community college students are larger than state grants, state programs still represent a significant investment of scarce dollars. In short, state governments need to pay attention to just how much they spend on community college students who drop out during their first year.

Table 2 highlights how much state taxpayers in all 50 states are paying for students who drop out before their second year. Combining state grants with state or local appropriations, eight states spent \$20 million or more in the 2008–09 academic year, with California topping this list at \$130 million. Texas and New York came in next (although far behind), spending \$60 million and \$45 million respectively in that single year.

In the last few years, especially after the 2006–07 academic year, the federal government increased direct student aid to students with financial need, mostly through Pell Grants. As the costs for this laudable program have escalated, Congress and the Obama administration have struggled with finding the money needed to fund this program without

cutting back many other federal programs that support higher education.¹² But during the last five years, more than \$650 million in federal student aid, mostly Pell Grants, went to community college students who dropped out after their first year.

Table 3 presents the order of all 50 states in which federal student grant dollars went to these students. California spent about \$24 million, and New York and Texas spent about \$14 million in the 2008–09 academic year. In eight other states—Florida, Mississippi, Georgia, Illinois, New Jersey, North Carolina, Ohio, and Alabama—the expenditures were more than \$5 million. In 10 more states, the expenditures were \$3 million or more. All together, these expenditures represent substantial costs, even as the federal government is struggling to meet its commitment to America’s college students with financial needs.

12 Among the casualties sacrificed to keep Pell Grants alive were subsidized graduate loans, year-round Pell Grants, and Leveraging Educational Assistance Partnership (LEAP) Grants, which provided grants to states for need-based financial aid. Subsidized interest on student loans during the grace period is about to be added to this list. See, for example, “Senate Budget Would Preserve Pell” in the September 21, 2011, issue of *Inside Higher Ed* at http://www.insidehighered.com/news/2011/09/21/senate_panel_approves_education_budget_for_fiscal_year_2012.

Table 2. States in Order of Total State or Local Expenditures on First-Year Community College Students Who Subsequently Dropped Out: 2008–09 Academic Year

State	Appropriations	State	Appropriations
California	\$130,000,000	Connecticut	\$8,400,000
Texas	\$60,000,000	New Mexico	\$8,400,000
New York	\$45,000,000	South Carolina	\$8,200,000
Wisconsin	\$32,000,000	Louisiana	\$6,900,000
North Carolina	\$27,000,000	Arkansas	\$6,400,000
Florida	\$25,000,000	Indiana	\$6,200,000
Illinois	\$24,000,000	Missouri	\$5,300,000
Michigan	\$20,000,000	Nebraska	\$4,700,000
Alabama	\$17,000,000	Utah	\$4,500,000
Georgia	\$17,000,000	Wyoming	\$4,300,000
Maryland	\$17,000,000	Hawaii	\$3,900,000
Ohio	\$17,000,000	Kentucky	\$3,900,000
Pennsylvania	\$16,000,000	Colorado	\$2,600,000
Arizona	\$15,000,000	Delaware	\$2,500,000
Minnesota	\$14,000,000	Idaho	\$2,300,000
Mississippi	\$14,000,000	Maine	\$2,100,000
New Jersey	\$13,000,000	West Virginia	\$1,500,000
Iowa	\$12,000,000	Rhode Island	\$1,400,000
Kansas	\$12,000,000	Montana	\$1,200,000
Massachusetts	\$11,000,000	New Hampshire	\$908,000
Virginia	\$11,000,000	North Dakota	\$687,000
Washington	\$11,000,000	Nevada	\$557,000
Oregon	\$9,000,000	South Dakota	\$483,000
Tennessee	\$9,000,000	Alaska	\$112,000
Oklahoma	\$8,500,000	Vermont	\$94,000

Table 3. States in Order of How Much Federal Student Aid Was Spent on First-Year Community College Students Who Subsequently Dropped Out: 2008–09 Academic Year

State	Federal Grants	State	Federal Grants
California	\$24,000,000	Arkansas	\$2,500,000
New York	\$14,000,000	Arizona	\$2,500,000
Texas	\$14,000,000	Louisiana	\$2,400,000
Florida	\$8,900,000	Washington	\$2,400,000
Mississippi	\$6,800,000	New Mexico	\$2,300,000
Georgia	\$6,600,000	Oregon	\$2,200,000
Illinois	\$5,900,000	Kansas	\$1,900,000
New Jersey	\$5,500,000	Colorado	\$1,500,000
North Carolina	\$5,200,000	Connecticut	\$1,500,000
Ohio	\$5,200,000	West Virginia	\$1,200,000
Alabama	\$5,100,000	Nebraska	\$745,000
Michigan	\$4,900,000	Maine	\$618,000
South Carolina	\$4,400,000	Utah	\$507,000
Minnesota	\$3,800,000	Montana	\$486,000
Pennsylvania	\$3,800,000	Idaho	\$479,000
Tennessee	\$3,600,000	Hawaii	\$475,000
Indiana	\$3,500,000	Rhode Island	\$443,000
Missouri	\$3,500,000	Wyoming	\$414,000
Virginia	\$3,500,000	Delaware	\$393,000
Massachusetts	\$3,000,000	South Dakota	\$319,000
Wisconsin	\$3,000,000	North Dakota	\$222,000
Iowa	\$2,800,000	New Hampshire	\$214,000
Maryland	\$2,800,000	Nevada	\$79,000
Kentucky	\$2,600,000	Vermont	\$62,000
Oklahoma	\$2,600,000	Alaska	\$9,000

State Data Table

In this section of the report, we present state-by-state the five-year cumulative expenditures to support first-year-only community college students. (See Table 4.) We present these data in the same categories of expenditures used earlier in this report: appropriations and state and federal grants to students. In addition, we combine these numbers for an estimate of the total costs of support for first-year students who subsequently dropped out.

We believe that these numbers should alert taxpayers and their representatives to the high costs that a state incurs when, as is unfortunately the case, large numbers of students fail to return to their community college for a second year.

Table 4. Five-Year Cumulative Expenditures on First-Year-Only Community College Students, by State: 2004–05 Through 2008–09 Academic Years

State	Appropriations	State Grants	Federal Grants	Combined Costs of Attrition
Alabama	\$80,000,000	\$4,200,000	\$20,000,000	\$100,000,000
Alaska	\$345,000	\$6,000	\$27,000	\$378,000
Arkansas	\$32,000,000	\$1,600,000	\$11,000,000	\$44,000,000
Arizona	\$56,000,000	\$468,000	\$9,200,000	\$65,000,000
California	\$390,000,000	\$25,000,000	\$64,000,000	\$480,000,000
Colorado	\$9,200,000	\$2,600,000	\$6,800,000	\$19,000,000
Connecticut	\$38,000,000	\$994,000	\$5,200,000	\$44,000,000
Delaware	\$13,000,000	\$847,000	\$1,500,000	\$15,000,000
Florida	\$140,000,000	\$16,000,000	\$36,000,000	\$190,000,000
Georgia	\$92,000,000	\$18,000,000	\$21,000,000	\$130,000,000
Hawaii	\$15,000,000	\$115,000	\$1,700,000	\$17,000,000
Idaho	\$10,000,000	\$274,000	\$2,100,000	\$13,000,000
Illinois	\$110,000,000	\$8,600,000	\$22,000,000	\$140,000,000
Indiana	\$27,000,000	\$2,900,000	\$10,000,000	\$40,000,000
Iowa	\$49,000,000	\$1,100,000	\$11,000,000	\$62,000,000
Kansas	\$56,000,000	\$174,000	\$7,800,000	\$64,000,000
Kentucky	\$19,000,000	\$5,400,000	\$12,000,000	\$37,000,000
Louisiana	\$34,000,000	\$1,500,000	\$9,400,000	\$45,000,000
Maine	\$11,000,000	\$1,000,000	\$2,800,000	\$15,000,000
Maryland	\$75,000,000	\$2,400,000	\$9,900,000	\$87,000,000
Massachusetts	\$57,000,000	\$4,100,000	\$11,000,000	\$73,000,000
Michigan	\$100,000,000	\$7,700,000	\$18,000,000	\$130,000,000
Minnesota	\$71,000,000	\$7,500,000	\$17,000,000	\$95,000,000
Mississippi	\$67,000,000	\$1,900,000	\$29,000,000	\$98,000,000
Missouri	\$25,000,000	\$5,400,000	\$13,000,000	\$43,000,000
Montana	\$5,500,000	\$626,000	\$2,300,000	\$8,500,000
Nebraska	\$23,000,000	\$348,000	\$3,700,000	\$27,000,000
Nevada	\$7,400,000	\$440,000	\$967,000	\$8,800,000
New Hampshire	\$4,300,000	\$422,000	\$860,000	\$5,600,000
New Jersey	\$67,000,000	\$11,000,000	\$20,000,000	\$98,000,000
New Mexico	\$39,000,000	\$2,100,000	\$8,600,000	\$50,000,000
New York	\$200,000,000	\$34,000,000	\$53,000,000	\$290,000,000
North Carolina	\$130,000,000	\$4,300,000	\$20,000,000	\$150,000,000
North Dakota	\$4,800,000	\$237,000	\$1,400,000	\$6,500,000
Ohio	\$80,000,000	\$8,500,000	\$21,000,000	\$110,000,000
Oklahoma	\$42,000,000	\$3,400,000	\$12,000,000	\$57,000,000
Oregon	\$49,000,000	\$2,200,000	\$7,700,000	\$58,000,000
Pennsylvania	\$70,000,000	\$3,100,000	\$14,000,000	\$87,000,000
Rhode Island	\$7,600,000	\$311,000	\$1,500,000	\$9,400,000
South Carolina	\$46,000,000	\$16,000,000	\$17,000,000	\$79,000,000
South Dakota	\$3,100,000	\$160,000	\$1,400,000	\$4,700,000
Tennessee	\$45,000,000	\$7,500,000	\$14,000,000	\$67,000,000
Texas	\$290,000,000	\$12,000,000	\$59,000,000	\$360,000,000
Utah	\$20,000,000	\$439,000	\$2,200,000	\$22,000,000
Vermont	\$399,000	\$67,000	\$249,000	\$717,000
Virginia	\$47,000,000	\$3,100,000	\$12,000,000	\$62,000,000
Washington	\$52,000,000	\$5,600,000	\$8,700,000	\$66,000,000
West Virginia	\$6,300,000	\$1,100,000	\$4,600,000	\$12,000,000
Wisconsin	\$110,000,000	\$4,100,000	\$10,000,000	\$130,000,000
Wyoming	\$19,000,000	\$854,000	\$1,800,000	\$21,000,000

Reducing the Hidden Costs of Low Community College Retention and Completion Rates

Community colleges are a key part of America's system of higher education and must play a central role in fulfilling the nation's effort to increase the education level of its population. Part of their appeal is their perceived low price to students. However, this report shows that something that seems so inexpensive can in fact be very costly, once we take into account the low levels of student success.

As the evidence mounts regarding high costs to students and taxpayers, improving the efficiency and effectiveness of community colleges is becoming increasingly important. More effort is being expended to identify avenues that could increase student success and reduce costs.

One of the most powerful calls for changing business as usual is the recent report *Time Is the Enemy*¹³ by Complete College America. In this report, Complete College America identifies several changes in the way in which higher education is organized that could create faster and shorter pathways to completion. The called-for reforms would change the very way in which courses are scheduled and limit the extent

of choice among courses that students currently have. Complete College America, for example, calls for block schedules, with fixed and predictable classroom meeting times, so that students know with certainty when they need to be on campus and when they can go to work. The report also calls for shorter academic terms, less time off between terms, and year-round scheduling.

Shortening the time to degree completion by allowing students to earn credits for proven competencies rather than simply through seat time is another reform that is gaining attention. This approach is central to the philosophy of Western Governors University, which has entered into agreements with a number of states to provide postsecondary degrees online. Competency-based education also is central to the practices of Valencia College, a highly successful community college in Florida, with a three-year graduation rate almost twice as high as the national average for community colleges.

Harnessing technology is commonly called upon as a way forward. Combining adaptive learning, adaptive testing, and social media into new "hybrid" learning platforms looks especially promising, and

¹³ *Time Is the Enemy* is available online at http://www.completecollege.org/docs/Time_Is_the_Enemy.pdf.

Carnegie Mellon's Open Learning Initiative is often singled out as the current "best in class." Although technological fixes have been used previously, the current environment seems to hold promise by increasing flexibility and personalizing the rate at which students attain necessary skills.

One of the most consistently identified barriers to higher persistence and graduation rates is the number of community college students in need of remediation. Simply put, the current approach to remediation has not worked, leading to calls for new and more effective approaches. Statway, created by the Carnegie Foundation for the Advancement of Teaching, is a promising approach to remedial mathematics education.¹⁴ Built on the premise that statistics, data analysis, and quantitative reasoning are essential for a growing number of occupations and professions, Statway's hope is that this focus will lead to more engagement by students and increased student success.

States also need to create incentives to improve community college retention and completion rates. Today, one of the most common approaches is to introduce performance budgeting—rewarding colleges with more money if they improve the success of their students. This approach began with Tennessee in the mid-1970s but has recently gained momentum, with as many as half the states experimenting with various formulas for rewarding institutional performance.

Finally, while Complete College America should be commended for its giant step forward in creating better metrics of student success, data collection and data dissemination are still in the dark ages. Students, their families, taxpayers, and government officials all need better information about student learning, the true costs of producing certificates and associate's degrees, and the labor market success of graduates from programs and campuses. Accurate

information can change consumer preferences,¹⁵ but such information is in short supply.

Finally, a word of caution: The national movement to reform higher education's business and instructional models is in the early stages. Much is yet to be learned. Indeed, if the history of other education reforms is a prologue to the future, many of the innovations that the nation is now pursuing will likely prove to be ineffective when subjected to rigorous testing in the complicated and difficult world of community colleges. But today, new ideas and new energy are being focused on fixing the undeniable problem of low community college retention and completion rates. And as this report shows, perhaps the only thing more expensive than fixing this problem is not fixing it.

¹⁴ For more information on Statway, see <http://www.carnegiefoundation.org/statway/>.

¹⁵ See Andrew P. Kelly and Mark Schneider, *Filling in the Blanks: How Information Can Affect Choice in Higher Education*, available at <http://www.aei.org/docLib/fillingintheblanks.pdf>.

Technical Appendix

To calculate the cost of first-year attrition in community colleges, we needed to estimate the number of first-year dropouts from each institution. To do so, we used data from the U.S. Department of Education’s Integrated Postsecondary Education Data System (IPEDS)¹⁶ and the Beginning Postsecondary Students (BPS) Longitudinal Study.¹⁷ We focused on public, two-year, degree-granting institutions of higher education (“community colleges”) that participate in Title IV federal student financial aid programs.

We classified students into four categories at the end of their first year at a community college: Enrolled, Graduated, Dropped Out, or Transferred. We obtained data on the size of cohort and number of students graduated or still enrolled by institution from the IPEDS Graduation Rate Survey (GRS). As

is well known, this survey is focused on first-time, full-time, degree- or certificate-seeking, beginning students, which is only a proportion of students enrolled in community colleges—and the ones most likely to persist and graduate.

IPEDS does not differentiate between students who dropped out and students who transferred into a four-year institution or another community college at the one-year mark; however, we needed to estimate that number for our analysis. To do so, we employed data from the most recent wave of BPS, a nationally representative sample that tracks students through postsecondary education. We used BPS data to distinguish between dropouts and transfers in the GRS cohort at the end of each year. BPS does not allow us to estimate these numbers at the individual campus level, so we created overall estimates separately for public, not-for-profit, and for-profit sectors. We then applied these sector estimates to campus counts obtained from IPEDS.

¹⁶ The IPEDS website is available at <http://nces.ed.gov/ipeds/>.

¹⁷ The Beginning Postsecondary Students Longitudinal Study (BPS) surveys cohorts of first-year, beginning students at the end of their first year, and then three and six years after first starting in postsecondary education. It collects data on student demographics, school and work experiences, persistence, transfer, and degree attainment. The BPS website is available at <http://nces.ed.gov/surveys/bps/>.

In the most recent BPS, more than 5,500 students were enrolled in public two-year colleges; by the end of their first year, 69.7 percent were still enrolled, 7 percent had graduated with an associate's degree, 1.7 percent had earned certificates, 16.7 percent had transferred to a different institution without obtaining a degree, and 11.1 percent had dropped out without obtaining a degree. We combined these last two numbers (27.8 percent) to estimate the number of students who left their community college. We calculated that approximately 40 percent of the students (11.1 percent/27.8 percent) who failed to return to their institution for the second year dropped out. We then applied this ratio to our IPEDS data to estimate the number of dropouts at the end of year one for each of 1,058 two-year public colleges and for each academic year, starting with 2004–05 and ending with 2008–09.

The second task of this report was to estimate the cost to taxpayers for educating a student attending a two-year public community college for one year. We focused on several key sources of government support: direct state and local appropriations to the campus, federal grants to students, and state grants to students. IPEDS also reports the total number of full-time equivalent (FTE) students on each campus, and we divided total appropriation and grants by total FTE.

We multiplied these FTE measures by the total number of dropouts to estimate the cost of first-year attrition. Other sources of government support (such as direct federal appropriations or capital expenditures were not included in our calculations). In addition, we focused on first-time, full-time, beginning students who are most likely to remain

in school and complete their associate's degrees.¹⁸ Hence, our estimates of the cost of attrition are likely far lower than a full accounting would produce.

It is important to remember that all estimates are based on data from individual campuses reported to IPEDS with an adjustment based on national data from BPS. State numbers reported in this study are based on aggregating individual campus-level data to the state level and are not based on state-level analysis. It may be possible to improve the individual campus-level predictions, with more complex models combining detailed BPS student-level estimates with IPEDS campus-level data; however, at this stage of our analysis of community colleges, we used overall national patterns for community colleges from BPS to adjust campus IPEDS numbers.

Finally, although we presented results at state and the national levels, estimates for every two-year college that participates in IPEDS are available through [CollegeMeasures.org](http://www.collegemeasures.org) at <http://www.collegemeasures.org>.

¹⁸ Complete College America documents the low graduation rates of part-time students. According to the report *Time Is the Enemy*, only 7.4 percent earn a two-year degree in four years and only 11.8 percent earn a one-year certificate within two years. See http://www.completecollege.org/docs/Time_Is_the_Enemy.pdf.

