

Abstract Title Page
Not included in page count.

Title: Performance-Based Scholarships: Replication at Six Sites Using Randomized Controlled Trials

Authors and Affiliations: Alexander Mayer, MDRC

Abstract Body

Limit 4 pages single-spaced.

Background / Context:

These studies are especially well-suited to the conference's theme, the role of replication. The six studies follow-up on positive findings from an earlier randomized controlled trial of performance based scholarships for community college students. They use randomized controlled trials to evaluate the impact of performance based scholarships on community college students' academic performance across the United States, targeting different segments of each college's student population. In each program, students had to meet clear academic benchmarks in order to earn the scholarship payment. Except for at one site, the programs showed positive impacts on the percentage of students who met the academic benchmark, and generally, the programs showed positive impacts on the number of credits students earned in the first year, although the results were less consistent for outcomes such as persistence. The present research explores the replication results for across the six sites in greater detail, and also considers the broader implications of the studies when considered together.

Community colleges – and postsecondary education more generally – have come to the forefront of civic dialogue in an economy that compels the public sector to do increasingly more with fewer resources. Policymakers, education leaders, and communities across the country recognize the need to improve college attendance and success in order to meet the increasing demand for a more educated workforce, but are faced with the realities of the current budgetary environment. At the same time, students are facing mounting costs to attend college, and financial aid has not been able to keep pace with these costs. This affects both college enrollment and persistence in college, and low-income students are especially disadvantaged. Evidence suggests that financial aid is positively associated with enrollment and with increased persistence (St. John, Musoba, Simmons, and Chung (2002), Kane (2004), Dynarski (2000, 2003), Cornwell, Mustard, and Sridhar (2006)). Prior to these studies, relatively little was known about the effectiveness of scholarships on student retention and academic performance, despite the prominent role scholarships have played in public and private support for higher education.

Purpose / Objective / Research Question / Focus of Study:

Performance-based scholarships were developed to help tackle some of the financial obstacles facing students in the postsecondary education system. In general, these scholarships aim to help reduce the financial burdens of low-income college students, and are structured to help incentivize good academic progress. The demonstration seeks to answer several questions:

1. What is the impact of these scholarships on short-term academic outcomes, including credit attempts and credit completions?
2. What is the impact of these scholarships on longer-term academic outcomes, including persistence in school and attainment of degrees and certificates?
3. Do the scholarships work in diverse settings, and for different types of students?

Setting:

Performance-based scholarships were evaluated in six states across the U.S. with eight educational institutions and one state-level intermediary. The postsecondary institutions involved were all community colleges or non-selective four-year colleges, all of whose populations contain predominantly low-income students.

Population / Participants / Subjects:

More than 12,000 low-income college students enrolled in the study and were randomly assigned to either a program group, which was eligible to receive a performance-based scholarship, or a control group, which was not eligible. Some states focused on particular populations of interest, including Latino male students, students in need of developmental (remedial) math courses, and students who are parents (please see Table 1 for more details about the student populations).

Intervention / Program / Practice:

The scholarship program varies a bit from state to state, but the basic structure is the same in all states. Students are generally paid at multiple points during the semester if they earn a certain number of credits with a “C” or better grade. By conditioning additional financial aid on meeting certain performance benchmarks, the programs seek to encourage students to focus on their studies, which, in turn, should lead them to perform better in their classes in the short term. In the medium term, they should progress through their degree requirements more quickly, which may then lead to long-term gains such as graduation or transfer to a four-year college. Finally, if the scholarship promotes academic success, the intervention could lead to improved labor market outcomes, including higher earnings.

Importantly, the scholarships are paid directly to students, allowing them to use the funds for their most pressing needs (whether books, child care, or other financial obligations that might disrupt their studies). Students have complete discretion over how they use the funds, although most report using it to help with a range of essential expenses. The scholarships are paid in addition to Pell Grants—the main federal source of need-based aid—and other existing financial aid programs, including state and institutional grants. In this way, students have more funds to cover academic and living expenses and can potentially reduce their dependency on loans. Lastly, unlike merit-based aid, performance-based scholarships are paid to students based on their academic performance in the current term, regardless of what happened in previous terms. That is, eligibility for the scholarship is not based on prior performance like high school GPA.

Students were offered the scholarship for between two and four semesters and were eligible to earn between \$500 and \$1,500 per semester. The duration and value of the scholarships varied by state (please see Table 2 for a summary of the performance-based scholarship interventions at each site).

Research Design:

The studies each use a random assignment research design, the “gold standard” in program evaluation. Random assignment creates two groups of students that are similar in characteristics that can be measured, such as age and gender, and in those that are more difficult to measure, such as tenacity and motivation. As a result, subsequent differences in outcomes (for example, credit accumulation) can be attributed with a high level of confidence to the program.

Data Collection and Analysis:

The study gathered data from a number of sources to track students' academic outcomes. In most states, academic measures were created from transcript data provided by the colleges themselves, and are based on outcomes at the college of random assignment only. In one state, academic measures were created from data provided by the National Student Clearinghouse and are based on data from all colleges that report to the Clearinghouse – more than 96% of American colleges and universities. In another state, academic measures were created from data provided by the state Board of Regents that covers all public and private two- and four- year colleges in the state.

Findings / Results:

In the first year after random assignment, in general, performance-based scholarships:

- Increase the proportion of students who met the academic benchmark incentivized by the scholarship. In all sites except New York, students in the program group met the academic benchmark at higher rates than students in the control group in one of the two semesters. These increases are sizeable. In the first term, they range from 7.0 percentage points in Ohio to 9.6 percentage points in Florida. In the second term, they range from 7.3 percentage points in Ohio to 17.6 percentage points in New Mexico.
- Increase the number of credits earned at the end of the first program year. With the exception of Florida and New Mexico, students who are eligible for performance-based scholarships earn more credits by the end of the first program year, compared to students in the control group. The impact ranges from about one credit earned over the year in New York to 1.7 credits earned in Arizona and Ohio.² For context, a typical course at these colleges bears 3 or 4 credits.
- Have mixed impacts on the proportion of students who registered for college in the second semester of the program. In two states, there are small impacts on second-semester registration (4.6 percentage points in Arizona and 3.8 percentage points in California). In the remainder of the sites in the demonstration, there are no statistically significant impacts on registration in the second semester of the program.

In the second year after random assignment, in general, performance-based scholarships:

- Had some impact on credit accumulation as of the end of the second year. In Ohio and New Mexico, there is about a two credit impact on credits earned by the end of the second year after random assignment. Notably, this impact has grown since the end of the first year. In New York, there are no statistically significant impacts on credits earned by the end of the second year.
- Continued to increase the proportion of students meeting the academic benchmark. In New Mexico, we find an 18 percentage point impact on meeting the benchmark in the third semester of the program and a 12 percentage point impact on meeting the benchmark in the

² The impact on credits earned can be thought of in terms of full-time equivalence (FTE) as well. An impact of two credits earned per program group member converts to 2,000 credits earned for 1,000 students, or 167 FTEs.

fourth semester of the program. Notably, in Ohio, we also find impacts on meeting the full-time academic benchmark in one of the semesters, even though the scholarship was no longer available during that semester (around 3.2 percentage points).

In the site with the longest follow-up so far, there have been impacts on degree attainment. Starting in year two, there is a 3.6 percentage point impact on earning any degree; at the end of year three, this impact is largely unchanged at 3.5 percentage points. Around 23 percent of control group students have earned a degree or certificate three years after random assignment, compared to 26.9 percent of program group students, representing an increase of around 15 percent. This is mostly driven by an impact on earning an associate's degree at the end of the third year. At some colleges, the program also lowered student loan debt (please see Tables 3- 6 for more details about program impacts).

A number of pre-specified subgroups were analyzed in order to determine if these scholarships work better for some types of students compared with others. Overall there are statistically significant impacts on credits earned in the first year of the program, across all subgroups: both men and women; Latino students; students who are parents; traditionally-aged and older students; students who are first in their families to attend college; and students who were employed at random assignment. However, the difference between the subgroups is not significant (except in the case of gender). For example, parents in the program group earned about 1.4 credits more than parents in the control group, over the first year of the program. Additionally, non-parents in the program group earned about 1.1 credits more than non-parents in the control group. However, the difference between these two impact estimates is not significant. This is encouraging—it means that the scholarships worked across a variety of different types of students (including a number of at-risk groups), and generally didn't work better or worse for any particular type of student (please see Tables 7 and 8 for more details about subgroups analysis).

Conclusions:

Performance-based scholarships are a promising way to tie additional financial aid to academic benchmarks and improve outcomes for low-income students. These studies show that performance-based scholarship programs can be replicated in diverse contexts across the United States and that they work for different types of students in these settings: the scholarships generally have positive impacts on students' academic performance. Together these trials produce highly reliable estimates of the impacts of performance-based scholarships.

This research also demonstrates that large scale replications using randomized controlled trials are possible in community colleges, and that the results can be informative not only to the participating sites, but to the field more broadly. States and scholarship-granting organizations seeking to be more purposeful with their scholarship dollars may want to consider performance-based scholarships as a way to incentivize academic success while providing needy students with additional financial aid.

Appendices

Not included in page count.

Appendix A. References

References are to be in APA version 6 format.

- Cornwell, C., Mustard, D. B., & Sridhar, D. J. (2006). The Enrollment Effects of Merit-based Financial Aid: Evidence from Georgia's HOPE Program. *Journal of Labor Economics*, 24(4), 761-786.
- Dynarski, S. (2000). Hope for Whom? Financial Aid for the Middle Class and Its Impact on College Attendance. *National Tax Journal*, 53(3), 629-661.
- Dynarski, S. M. (2003). Does Aid Matter? Measuring the Effect of Student Aid on College Attendance and Completion. *The American Economic Review*, 93(1), 279-288.
- Kane, T. J. (2004). Evaluating the Impact of the D.C. Tuition Assistance Grant Program *NBER Working Paper No. 10658*. Cambridge, MA: National Bureau of Economic Research.
- St. John, E. P., Musoba, G. D., Simmons, A. B., & Chung, C.-G. (2002). Meeting the Access Challenge: Indiana's Twenty-First Century Scholars Program. Indianapolis, IN: Lumina Foundation for Education.

Appendix B. Tables and Figures

Not included in page count.

1. BIF
2. Summary of PBS Interventions
3. Year One Academic Outcomes
4. Year Two Academic Outcomes
5. Degree Outcomes
6. Financial Aid Outcomes
7. Subgroup Analysis – Credits Earned
8. Subgroup Analysis – Registration

The Performance-Based Scholarship Demonstration

Table 1

Selected Characteristics of Sample Members at Baseline, by Program

| Characteristic (%) | Opening Doors | | | | New | | |
|--|---------------|---------|------------|---------|--------|----------|-------|
| | Louisiana | Arizona | California | Florida | Mexico | New York | Ohio |
| Gender | | | | | | | |
| Male | 7.6 | 100.0 | 39.8 | 33.7 | 39.2 | 30.9 | 13.6 |
| Female ^a | 92.4 | 0.0 | 60.2 | 66.3 | 60.8 | 69.1 | 86.4 |
| Average age (years) | 25.3 | 24.3 | 17.6 | 27.0 | 18.0 | 26.5 | 29.9 |
| Race/Ethnicity ^b | | | | | | | |
| Hispanic | 2.6 | 99.7 | 60.7 | 30.7 | 60.6 | 44.3 | 8.6 |
| White | 10.5 | 0.1 | 20.3 | 30.5 | 21.8 | 6.1 | 54.6 |
| Black | 84.9 | 0.0 | 3.8 | 33.1 | 2.7 | 37.2 | 31.4 |
| Asian or Pacific Islander | 0.4 | 0.0 | 11.2 | 1.2 | 3.5 | 9.7 | 0.6 |
| Other | 1.6 | 0.2 | 3.9 | 4.4 | 11.3 | 2.7 | 4.8 |
| Have any children | 100.0 | 24.6 | NA | 44.1 | 1.8 | 47.8 | 99.7 |
| Household receiving any government benefits ^c | 70.7 | 37.5 | NA | 38.0 | NA | 37.9 | 65.8 |
| Missing | 0.4 | 12.4 | NA | 12.6 | NA | 12.0 | 4.0 |
| Currently employed | 51.6 | 44.9 | NA | 50.8 | 49.0 | 56.0 | 48.8 |
| Diplomas/degrees earned ^d | | | | | | | |
| High school diploma | 77.9 | 83.1 | NA | 75.4 | 97.8 | 65.0 | 74.2 |
| GED | 18.6 | 14.7 | NA | 26.3 | 1.3 | 33.1 | 22.7 |
| Occupational/technical certificate | 9.8 | 7.9 | NA | 13.7 | 1.0 | 13.3 | 15.3 |
| Associate's degree or higher | 0.5 | 2.1 | NA | 1.3 | 0.2 | 2.6 | 0.6 |
| None of the above | 3.1 | 2.6 | NA | 0.1 | 0.7 | 2.4 | 2.2 |
| First person in family to attend college | 42.6 | 36.7 | 53.7 | 33.3 | 32.8 | 32.9 | 30.0 |
| Sample size (total = 12,632) | 1,019 | 1,028 | 4,642 | 1,075 | 1,081 | 1,502 | 2,285 |

(continued)

Table 1 (continued)

SOURCE: MDRC calculations using Baseline Information Form (BIF) data.

NOTES: NA = Not available because question was not asked on BIF for this site.

Calculations for this table used all available data.

Missing values are only included in variable distributions for characteristics with more than 5 percent of the sample missing.

^aFemale students are not eligible to participate in the program at Pima Community College; thus, gender was imputed and not explicitly asked on the BIF.

^bRespondents who said they are Hispanic and chose a race are included only in the Hispanic category. Respondents who said they are not Hispanic and chose more than one race are included in the Other category. These respondents, combined with those who said they were American Indian or Alaskan Native or another race/ethnicities, are included in "Other."

^cBenefits include unemployment/dislocated worker benefits, Supplemental Security Income (SSI) or disability benefits, cash assistance or welfare, food stamps, and Section 8 or public housing.

^dDistributions may not add to 100 percent because categories are not mutually exclusive.

The Performance-Based Scholarship Demonstration

Table 2

Summary of PBS Interventions

| Opening Doors Louisiana | | PBS Arizona | PBS California | PBS Florida | PBS New Mexico | PBS New York | PBS Ohio |
|---|---|------------------------------------|---|--------------------------|--------------------------|---|--------------------------|
| <u>Sample Selection Criteria</u> | | | | | | | |
| Age | 18-34 | No age criteria | 16-19 | At least 18 | 17-20 | 22-35 | At least 18 |
| Low-Income | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Additional Requirements | Must be a parent Earned a HS diploma, GED, or passing score on college entrance exam | Hispanic males < 45 credits earned | Must be 1st year student Must have completed FAFSA and Cal Grant | In need of remedial math | Must be 1st year student | Live away from parents In need of at least 1 remedial course | Must be a parent |
| <u>Intervention</u> | | | | | | | |
| Scholarship amount per term | \$1,000 | Up to \$1,500 | \$333 - \$1000 | \$600 | \$1,000 | \$1,300 | \$300 - \$900 |
| Scholarship duration | 2 semesters | 3 semesters | 1-4 semesters | 3 semesters | 4 semesters | 2 semesters plus 1 summer semester ^a | 2 semesters |
| Scholarship disbursement per term | 3 | 3 | Varies | 2 | 3 | 3 | 1 |
| Max amount | \$2,000 | \$4,500 | \$4,000 | \$1,800 | \$4,000 | \$2,600 to \$3,900 ^a | \$1,800 |
| Years of program operation | Spring 2004 to Summer 2005 | Fall 2010 to Fall 2012 | Fall 2009 to Spring 2012 | Fall 2010 to Fall 2012 | Fall 2008 to Spring 2011 | Fall 2008 to Summer 2010 | Fall 2008 to Winter 2010 |

(continued)

Table 2 (continued)

| Opening Doors Louisiana | | PBS Arizona | PBS California | PBS Florida | PBS New Mexico | PBS New York | PBS Ohio |
|--|---|--|--|--|---|--|--|
| Total sample | 1,019 | 1,028 | 4,642 | 1,076 | 1,081 | 1,502 | 2,285 |
| <u>Performance Benchmarks</u> | | | | | | | |
| Academic criteria | Enroll in college, and complete at least 6 credits with a "C" or better average | Part time: 6-11 credits with "C" or better in each Full time: 12 or more credits, "C" or better in each | Enroll in college, and complete at least 6 credits with a "C" or better average | Complete a sequence of math courses with a "C" or better | Complete at least 12 (first semester) or 15 (subsequent semesters) credits with a "C" or better average | Enroll in college, and complete at least 6 credits with a "C" in each | Part time: 6-11 credits with "C" or better in each Full time: 12 or more credits, "C" or better in each |
| Service criteria | Meet with advisor | Meet with advisor, complete tutoring and workshop requirements | N/A | Complete tutoring requirements | Meet with advisor | N/A | N/A |
| <u>Participating Institutions</u> | | | | | | | |
| Participating Institutions | Delgado Community College Louisiana Technical College | Pima Community College | California Student Aid Commission and LA Chamber of Commerce operate Cash for College workshops and the PBS program. | Hillsborough Community College | University of New Mexico | Hostos Community College Borough of Manhattan Community College | Lorain County Community College Owens Community College Sinclair Community College |

SOURCE: Performance-Based Scholarship Study Design.

NOTES: Scholarships are limited to the institution where the evaluation occurred, with the exception of PBS California. For this site, scholarships were portable to any accredited, degree-granting, 2-year, or 4-year post-secondary institution in the U.S.

^aNew York had a 3-way design where half of all New York program group students are eligible to receive a summer scholarship.

The Performance-Based Scholarship Demonstration

Table 3

Year One Academic Outcomes Among Sample Members

| Program | Sample Size | Program Group | Control Group | Difference | Percent Change |
|---|----------------|------------------|------------------|------------|-------------------|
| <u>Registered in second program term (%)^a</u> | | | | | |
| Opening Doors Louisiana | 537 | 57.1 | 38.9 | 18.1 *** | 46.6 |
| Arizona | 1,028 | 78.6 | 74.0 | 4.6 * | 6.2 |
| California ^b | 4,642 | 87.6 | 83.9 | 3.8 *** | 4.5 |
| Florida | 1,075 | 78.6 | 77.1 | 1.6 | 2.0 |
| New Mexico | 1,081 | 91.6 | 91.2 | 0.4 | 0.5 |
| New York | 1,502 | 78.1 | 76.6 | 1.6 | 2.0 |
| Ohio ^c | 2,285 | 73.8 | 71.1 | 2.7 | 3.8 |
| <u>Credits earned as of end of first year, post-RA</u> | | | | | |
| Opening Doors Louisiana | 537 | 11.0 | 7.7 | 3.3 *** | 43.7 |
| Arizona | 1,028 | 16.1 | 14.3 | 1.7 ** | 12.2 |
| Florida | 1,075 | 14.9 | 13.9 | 1.0 | 7.3 |
| New Mexico | 1,081 | 25.7 | 24.8 | 0.9 | 3.7 |
| New York | 1,502 | 16.3 | 15.5 | 0.9 * | 5.6 |
| Ohio | 2,285 | 15.6 | 13.9 | 1.7 *** | 12.1 |
| <u>Met academic benchmark in first program term (%)^d</u> | | | | | |
| Opening Doors Louisiana | 537 | 43.7 | 29.5 | 14.2 *** | 48.2 |
| Arizona | 1,028 | 37.9 | 29.4 | 8.5 *** | 28.9 |
| Florida | 1,075 | 55.7 | 46.0 | 9.6 *** | 21.0 |
| New Mexico | 1,081 | 80.2 | 78.5 | 1.7 | 2.2 |
| New York | 1,502 | 71.4 | 70.5 | 0.9 | 1.3 |
| Ohio | 2,285 | 33.2 | 26.3 | 7.0 *** | 26.4 |
| <u>Met academic benchmark in second program term (%)^e</u> | | | | | |
| Opening Doors Louisiana | 537 | 32.5 | 17.3 | 15.2 *** | 87.8 |
| Arizona | 1,028 | 28.3 | 16.9 | 11.4 *** | 67.6 |
| Florida | 1,075 | 29.4 | 21.4 | 8.0 *** | 37.5 |
| New Mexico | 1,081 | 49.8 | 32.3 | 17.6 *** | 54.4 |
| New York | 1,502 | 57.4 | 56.8 | 0.6 | 1.1 |
| Ohio ^c | 2,285 | 24.9 | 17.6 | 7.3 *** | 41.2 |

(continued)

Table 3 (continued)

SOURCES: Calculations using National Student Clearinghouse, Delgado Community College, Louisiana Technical College, Pima Community College, Hillsborough Community College, University of New Mexico, Borough of Manhattan Community College, Hostos Community College, and Ohio Board of Regents transcript data.

NOTES: A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

Estimates for all sites, excluding California, are adjusted by research cohort and campus. For California, estimates are adjusted by research cohort and workshop region.

Only the first two cohorts are shown for Opening Doors Louisiana.

^aRepresents the second term over which program group students were eligible for a scholarship.

^bRepresents data pulled from the National Student Clearinghouse. Data were not found for 305 students (6.6%) of the sample.

^cDue to the timing of scholarship-eligible terms, this measure is calculated slightly differently for students at Sinclair Community College. For students in the fall 2008 cohort, this represents registration in the spring 2009 quarter. For students in the winter 2009 cohort, this represents registration in the summer 2009 quarter (over which students were not eligible for a scholarship). For students in the spring 2009 cohort, this represents registration in the fall 2009 quarter. For students at Lorain County and Owens Community Colleges, depending on the cohort, this represents the fall or spring term.

^dDue to the timing of scholarship-eligible terms and data limitations, some of these measures are proxies. For Louisiana, this represents the proportion of students who earned 6 or more credits with a "C" or better overall in their first term (depending on the cohort, this could be a fall, spring or summer term). For Arizona, this represents the proportion of students who earned 12 or more credits with a "C" or better in their first term (depending on the cohort, this could be a fall or spring term). For Florida, this represents the proportion of students who earned a "C" or better in MAT 0024/0028 in their first term (depending on the cohort, this could be a fall or spring term). For New Mexico, this represents the proportion of students who earned 12 or more credits with a "C" or better overall in their first term (a fall term), and includes students who earned the award over the winter intersession. For New York, this represents the proportion of students who earned 6 or more credits with a "C" or better in their first term (depending on the cohort, this could be a fall or spring term). For Ohio, this represents the proportion of students who earned 12 or more credits in their first term (depending on the cohort, this could be a fall, winter, or spring term).

^eDue to the timing of scholarship-eligible terms and data limitations, some of these measures are proxies. For Louisiana, this represents the proportion of students who earned 6 or more credits with a "C" or better overall in their second term (depending on the cohort, this could be a fall, spring or summer term). For Arizona, this represents the proportion of students who earned 12 or more credits with a "C" or better in their second term (depending on the cohort, this could be a fall or spring term). For Florida, this represents the proportion of students who earned a "C" or better in MAT 1033 in their second term (depending on the cohort, this could be a fall or spring term). For New Mexico, this represents the proportion of students who earned 15 or more credits with a "C" or better overall in their second term (a spring term), and does not include students who earned the award over the summer. For New York, this represents the proportion of students who earned 6 or more credits with a "C" or better in their second term (depending on the cohort, this could be a fall or spring term). For Ohio, this represents the proportion of students who earned 12 or more credits in their second term (depending on the cohort, this could be a fall, winter, or spring term).

The Performance-Based Scholarship Demonstration

Table 4

Year Two Academic Outcomes Among Sample Members

| Program | Sample Size | Program Group | Control Group | Difference | Percent Change |
|---|----------------|------------------|------------------|------------|-------------------|
| <u>Registered at the beginning of second year (%)</u> | | | | | |
| Opening Doors Louisiana | 537 | 30.1 | 22.9 | 7.2 ** | 31.6 |
| California ^a | 4,642 | 81.3 | 78.9 | 2.4 * | 3.0 |
| New Mexico | 1,081 | 77.6 | 78.5 | -0.9 | -1.2 |
| New York | 1,502 | 61.9 | 60.7 | 1.2 | 2.0 |
| Ohio | 2,285 | 60.5 | 59.2 | 1.3 | 2.2 |
| <u>Credits earned as of end of second year, post-RA</u> | | | | | |
| Opening Doors Louisiana | 537 | 13.7 | 10.0 | 3.7 *** | 36.9 |
| New Mexico | 1,081 | 46.5 | 44.3 | 2.2 * | 5.1 |
| New York | 1,502 | 26.7 | 25.6 | 1.1 | 4.3 |
| Ohio | 2,285 | 24.8 | 22.4 | 2.4 *** | 10.6 |
| <u>Met academic benchmark in third term (%)^b</u> | | | | | |
| Opening Doors Louisiana | 537 | 14.7 | 11.1 | 3.6 | 32.3 |
| New Mexico | 1,081 | 50.7 | 32.3 | 18.4 *** | 57.1 |
| New York | 1,502 | 44.0 | 44.2 | -0.2 | -0.4 |
| Ohio | 2,285 | 16.1 | 13.8 | 2.3 | 16.5 |
| <u>Met academic benchmark in fourth term (%)^c</u> | | | | | |
| Opening Doors Louisiana | 537 | 4.9 | 5.2 | -0.3 | -5.2 |
| New Mexico | 1,081 | 42.4 | 30.3 | 12.1 *** | 39.9 |
| New York | 1,502 | 33.4 | 34.1 | -0.7 | -1.9 |
| Ohio ^d | 2,285 | 12.5 | 9.4 | 3.2 ** | 33.8 |

(continued)

Table 4 (continued)

SOURCES: Calculations using National Student Clearinghouse, Delgado Community College, Louisiana Technical College, University of New Mexico, Borough of Manhattan Community College, Hostos Community College, and Ohio Board of Regents transcript data.

NOTES: A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

Estimates for all sites, excluding California, are adjusted by research cohort and campus. For California, estimates are adjusted by research cohort and workshop region.

Only the first two cohorts are shown for Opening Doors Louisiana.

^aRepresents data pulled from the National Student Clearinghouse. Data were not found for 305 students (6.6%) of the sample.

^bDue to the timing of scholarship-eligible terms and data limitations, some of these measures are proxies. For Louisiana, this represents the proportion of students who earned 6 or more credits with a "C" or better overall in the first term of their second year (depending on the cohort, this could be a fall, spring or summer term). Program group students were no longer eligible for a performance-based scholarship during this time. For New Mexico, this represents the proportion of students who earned 15 or more credits with a "C" or better overall in their first term of their second year (a fall term), and includes students who earned the award over the winter intersession. Program group students were still eligible for a performance-based scholarship during this time. For New York, this represents the proportion of students who earned 6 or more credits with a "C" or better in their first term of their second year (depending on the cohort, this could be a fall or spring term). Program group students were no longer eligible for a performance-based scholarship during this time. For Ohio, this represents the proportion of students who earned 12 or more credits in the first term of their second year (depending on the cohort, this could be a fall, winter, or spring term). Program group students were no longer eligible for a performance-based scholarship during this time.

^cDue to the timing of scholarship-eligible terms and data limitations, some of these measures are proxies. For Louisiana, this represents the proportion of students who earned 6 or more credits with a "C" or better overall in their second term of their second year (depending on the cohort, this could be a fall, spring or summer term). Program group students were no longer eligible for a performance-based scholarship during this time. For New Mexico, this represents the proportion of students who earned 15 or more credits with a "C" or better overall in their second term of their second year (a spring term), and does not include students who earned the award over the summer. Program group students were still eligible for a performance-based scholarship during this time. For New York, this represents the proportion of students who earned 6 or more credits with a "C" or better in their second term of their second year (depending on the cohort, this could be a fall or spring term). Program group students were no longer eligible for a performance-based scholarship during this time. For Ohio, this represents the proportion of students who earned 12 or more credits in their second term of their second year (depending on cohort, this could be a fall, winter, or spring term). Program group students were no longer eligible for a performance-based scholarship during this time.

^dDue to the timing of scholarship-eligible terms, this measure is calculated slightly differently for students at Sinclair Community College. For students in the fall 2008 cohort, this represents registration in the spring 2009 quarter. For students in the winter 2009 cohort, this represents registration in the summer 2009 quarter (over which students were not eligible for a scholarship). For students in the spring 2009 cohort, this represents registration in the fall 2009 quarter. For students at Lorain County and Owens Community Colleges, depending on the cohort, this represents the fall or spring term. Program group students were no longer eligible for a performance-based scholarship during this time.

The Performance-Based Scholarship Demonstration

Table 5

Ohio Degree Attainment During the First Three Years

| Outcome (%) | Program Group | Control Group | Difference | Standard Error |
|--|------------------|------------------|------------|-------------------|
| Earned any degree as of end of: | | | | |
| First year | 9.5 | 8.5 | 1.1 | 1.2 |
| Second year | 20.5 | 16.9 | 3.6 ** | 1.7 |
| Third year | 26.9 | 23.3 | 3.5 * | 1.8 |
| Highest degree earned as of end of third year ^a : | | | | |
| Certificate | 6.5 | 6.0 | 0.5 | 1.0 |
| Associate's | 19.2 | 16.5 | 2.7 * | 1.6 |
| Bachelor's | 1.2 | 0.9 | 0.3 | 0.4 |
| Sample size (total = 2,285) | 1,359 | 926 | | |

SOURCES: Calculations using Ohio Board of Regents degree data.

NOTES: A two-tailed t-test was applied to differences between the research groups. Statistical significance levels are indicated as *** = 1 percent, ** = 5 percent, and * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

Estimates are adjusted by research cohort and campus.

Estimates are based on most recent data available and may change with additional rounds of processing.

^aCategories listed are mutually exclusive.

The Performance-Based Scholarship Demonstration

Table 6

Year One Financial Aid Outcomes

| Program | Sample Size | Program Group | Control Group | Difference | Percent Change |
|---|----------------|------------------|------------------|------------|-------------------|
| Total financial aid received (\$) | | | | | |
| New Mexico | 1,081 | 11,098 | 10,167 | 932 *** | 9.2 |
| New York | 1,502 | 8,048 | 5,839 | 2,209 *** | 37.8 |
| Ohio | 2,285 | 7,947 | 7,445 | 502 *** | 6.7 |
| Total performance-based scholarship received (\$) | | | | | |
| New Mexico | 1,081 | 1,440 | 0 | 1,440 *** | - |
| New York | 1,502 | 2,050 | 0 | 2,050 *** | - |
| Ohio | 2,285 | 765 | -1 | 766 *** | - |
| Total loans received (\$) | | | | | |
| New Mexico | 1,081 | 1,179 | 1,525 | -347 ** | -22.7 |
| New York | 1,502 | 1,042 | 1,033 | 10 | 0.9 |
| Ohio | 2,285 | 2,853 | 3,187 | -334 *** | -10.5 |

SOURCES: Calculations using CUNY Institutional Research Database, University of New Mexico, Lorain County Community College, Owens Community College, and Sinclair Community College financial aid data.

NOTES: A two-tailed t-test was applied to differences between the research groups. Statistical significance levels are indicated as *** = 1 percent, ** = 5 percent, and * = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

Estimates are adjusted by research cohort and campus.

The financial aid outcomes for the New York study represent financial aid awarded, which is distinct from financial aid received. The financial aid outcomes for the New Mexico and Ohio studies represent financial aid received.

The Performance-Based Scholarship Demonstration

Table 7

Credits Earned as of End of First Year at Five Sites, by Subgroup

| Subgroup | Sample Size | Program Group | Control Group | Difference | Standard Error | Difference Between Subgroups |
|---|-------------|---------------|---------------|------------|----------------|------------------------------|
| <u>Gender</u> | | | | | | |
| Male | 2,588 | 17.5 | 15.7 | 1.8 *** | 0.4 | † |
| Female | 4,383 | 17.2 | 16.2 | 1.0 *** | 0.3 | |
| Sample size | 6,971 | | | | | |
| <u>Hispanic</u> | | | | | | |
| Yes | 2,845 | 17.9 | 16.8 | 1.1 *** | 0.4 | |
| No | 4,033 | 16.9 | 15.4 | 1.5 *** | 0.3 | |
| Sample size | 6,878 | | | | | |
| <u>Parent</u> | | | | | | |
| Yes | 3,721 | 15.5 | 14.1 | 1.4 *** | 0.3 | |
| No | 3,212 | 19.4 | 18.3 | 1.1 *** | 0.3 | |
| Sample size | 6,933 | | | | | |
| <u>Younger than 20 years old</u> | | | | | | |
| Yes | 1,826 | 21.6 | 20.6 | 1.0 ** | 0.5 | |
| No | 5,145 | 15.8 | 14.4 | 1.4 *** | 0.3 | |
| Sample size | 6,971 | | | | | |
| <u>First in family to attend college</u> | | | | | | |
| Yes | 2,211 | 16.9 | 15.3 | 1.6 *** | 0.4 | |
| No | 4,574 | 17.5 | 16.5 | 1.0 *** | 0.3 | |
| Sample size | 6,785 | | | | | |
| <u>Employed at beginning of program</u> | | | | | | |
| Yes | 3,424 | 17.2 | 15.9 | 1.3 *** | 0.3 | |
| No | 3,413 | 17.5 | 16.2 | 1.3 *** | 0.4 | |
| Sample size | 6,837 | | | | | |
| <u>Program with services component^a</u> | | | | | | |
| Yes | 3,184 | 19.0 | 17.7 | 1.2 *** | 0.4 | |
| No | 3,787 | 15.9 | 14.6 | 1.4 *** | 0.3 | |
| Sample size | 6,971 | | | | | |

(continued)

Table 7 (continued)

SOURCE: Calculations using Baseline Information Form (BIF) data and Pima Community College, Hillsborough Community College, Lorain County Community College, Owens Community College, Sinclair Community College, University of New Mexico, Borough of Manhattan Community College, and Hostos Community College transcript data.

NOTES: A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A two-tailed t-test was applied to differences of impacts between subgroups. Statistical significance levels are indicated as: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

Estimates are adjusted by research cohort and campus.

^aThe programs with a services component are located in Arizona, Florida, and New Mexico.

The Performance-Based Scholarship Demonstration

Table 8

Registration at Beginning of Second Year at Six Sites, by Subgroup

| Subgroup | Sample Size | Program Group | Control Group | Difference | Standard Error | Difference Between Subgroups |
|--|-------------|---------------|---------------|------------|----------------|------------------------------|
| <u>Gender</u> | | | | | | |
| Male | 3,956 | 71.3 | 68.5 | 2.8 * | 1.5 | |
| Female | 6,903 | 72.0 | 71.2 | 0.8 | 1.1 | |
| Sample size | 10,859 | | | | | |
| <u>Hispanic</u> | | | | | | |
| Yes | 5,170 | 74.3 | 71.7 | 2.6 ** | 1.3 | |
| No | 5,562 | 69.4 | 68.9 | 0.5 | 1.3 | |
| Sample size | 10,732 | | | | | |
| <u>Parent^a</u> | | | | | | |
| Yes | 3,484 | 61.4 | 60.8 | 0.6 | 1.7 | |
| No | 2,701 | 68.6 | 68.0 | 0.5 | 1.8 | |
| Sample size | 6,185 | | | | | |
| <u>Younger than 20 years old</u> | | | | | | |
| Yes | 6,173 | 79.3 | 77.5 | 1.9 * | 1.1 | |
| No | 4,687 | 61.7 | 60.8 | 0.9 | 1.4 | |
| Sample size | 10,860 | | | | | |
| <u>First in family to attend college</u> | | | | | | |
| Yes | 4,442 | 72.8 | 70.5 | 2.3 * | 1.4 | |
| No | 6,215 | 71.0 | 70.3 | 0.8 | 1.2 | |
| Sample size | 10,657 | | | | | |
| <u>Employed at beginning of program^a</u> | | | | | | |
| Yes | 3,100 | 65.8 | 65.5 | 0.4 | 1.7 | |
| No | 3,003 | 63.7 | 62.3 | 1.4 | 1.8 | |
| Sample size | 6,103 | | | | | |
| <u>Program with services component^b</u> | | | | | | |
| Yes | 2,431 | 67.7 | 67.7 | 0.0 | 1.9 | |
| No | 8,429 | 72.9 | 71.0 | 1.9 * | 1.0 | |
| Sample size | 10,860 | | | | | |

(continued)

Table 8 (continued)

SOURCE: Calculations using Baseline Information Form (BIF) data, National Student Clearinghouse data, and Pima Community College, Hillsborough Community College, Lorain County Community College, Owens Community College, Sinclair Community College, University of New Mexico, Borough of Manhattan Community College, and Hostos Community College transcript data.

NOTES: A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; * = 10 percent.

A two-tailed t-test was applied to differences of impacts between subgroups. Statistical significance levels are indicated as: ††† = 1 percent; †† = 5 percent; † = 10 percent.

Rounding may cause slight discrepancies in sums and differences.

Estimates for all sites, excluding California, are adjusted by research cohort and campus. For California, estimates are adjusted by research cohort and workshop region.

Results shown include the first two of three cohorts in Arizona and Florida.

^aData on parental status and employment were not collected for California students.

^bThe programs with a services component are located in Arizona, Florida, and New Mexico.