An Eight-Year Cost Analysis from a Randomized Controlled Trial of CUNY’s Accelerated Study in Associate Programs

Gilda Azurdia
Katerina Galkin

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Abstract

Developed by the City University of New York (CUNY), the Accelerated Study in Associate Programs (ASAP) is a comprehensive program that provides students with up to three years of financial and academic support and other services. In return, students are expected to enroll in classes full time and participate in essential program services. An earlier experimental evaluation found that ASAP nearly doubled graduation rates three years after students entered the study. This paper summarizes the effects on education and financial aid outcomes over an eight-year follow-up period, or five years after the end of program services. This paper also presents the educational investment in students associated with providing these services and any educational investment in students from the CUNY community colleges after the program services were no longer provided. Through the eight-year follow-up period, ASAP’s effects on associate’s degree receipt persisted, indicating that the program not only helped students graduate faster, but also helped some students who would have never graduated without the program earn a degree. ASAP also led to a significant increase in the amount of financial aid students received through federal and state grants. The net cost (the difference between the total program group costs and the total control group costs) averaged $13,838 per program group member over eight years. CUNY spent, on average, an additional $9,162 per degree earned for students offered ASAP, compared with the control group students over the eight-year follow-up period. The findings also show that the program resulted in increased financial aid from the Pell Grant Program and the New York State Tuition Assistance Program, and reduced the grant dollars these programs invested per degree earned.
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Introduction

In today’s labor market, many jobs require training or education beyond a high school diploma or General Educational Development (GED) certificate. Starting in 2020, it is estimated that 65 percent of jobs will require postsecondary education.¹ Declining and stagnant wages over the past few years also make it important for people entering or already in the workforce to gain additional education or training to increase their earning potential.

Over the past few decades, college enrollment has increased.² Community colleges serve about 40 percent of all college students and they serve a disproportionate number of low-income and minority students.³ Community college tuition and fees are much lower than those at universities,⁴ and class schedules can be more flexible, with colleges often offering weekend and night classes to accommodate students who need to work. For a large share of the population, community colleges represent an important step to higher education and upward mobility.

Most students start college with the intention of completing a degree program, but many do not graduate. Among students attempting to earn an associate’s degree in community colleges, 25 percent are estimated to graduate within three years.⁵ Research suggests that reasons for this low graduation rate include students’ inability to cover the full cost of a college education, students’ low basic skill levels, and limited academic support.

The Accelerated Study in Associate Programs (ASAP), which was launched at the City University of New York (CUNY), has been found to be effective in helping more students graduate and helping some graduate more quickly. The program is more intensive and lasts longer than most community college reforms aimed at improving students’ persistence in and completion of community college. MDRC evaluated the program using a randomized controlled trial, for two cohorts of students that began school in the 2010 spring and fall semesters.⁶ CUNY also has been conducting ongoing research of the program.⁷ MDRC’s study found that the program led to a substantial increase in graduation rates — increasing students’ three-year graduation rates by 18 percentage points and six-year graduation rates by 10 percentage points.⁸ These positive results have been impressive given that many other similar reforms have only led to modest increases in students’ academic progress and small effects on graduation rates.⁹ The ASAP model

¹Carnevale, Smith, and Strohl (2013).
²Hussar and Bailey (2019); Rooney et al. (2006).
³Ma and Baum (2016).
⁴Ma, Baum, Pender, and Libassi (2019).
⁵McFarland et al. (2019).
⁶Each eligible student who agreed to participate was assigned, at random, either to the program group, whose members had the opportunity to participate in ASAP, or to the control group, whose members had the opportunity to receive the usual college services. By tracking both groups over time and comparing their outcomes, MDRC can determine the impact or “value added” of the ASAP program.
⁷City University of New York (2019a).
⁹Bettinger and Baker (2014); Mayer, Patel, and Guiterrez (2015); Weissman, Cerna, and Cullinan (2019); Weiss and Headlam (2018); Weiss, Ratledge, Sommo, and Gupta (2015).
was also replicated in Ohio, with some modifications, and achieved similarly large estimated effects on three-year graduation rates.10

This paper presents a summary of ASAP’s long-term effects on education and financial aid outcomes eight years after students entered the study. It builds on a previous cost analysis and presents findings for the full eight-year follow-up period related to the following:

1. **The costs associated with educating students after the program ended.** While the cost of ASAP services is zero after the three-year program ends, ASAP may still have an impact on the amount invested in students’ education after it ends since some students from both research groups continue taking college credits and using college resources. For instance, long-term follow-up indicates that ASAP students attempt fewer credits than their control group counterparts after the program ends (since so many more students in ASAP have graduated). This could result in some cost savings as less needs to be invested in ASAP students since fewer of them are still working toward graduation after the program ends.

2. **The revenue that colleges may expect when offering ASAP.** A program that increases the number of credits that students attempt (as ASAP does during the program) increases a college’s revenue from tuition and through state funding. Some of this revenue offsets the costs of operating the program, and it is important to estimate this amount.

3. **The program’s long-term cost-effectiveness from the perspectives of the college and the Federal Pell Grant Program and the New York State Tuition Assistance Program (TAP) (which provide the financial aid that most low-income students receive).** The findings presented in this paper expand on the three-year cost-effectiveness analyses in Scrivener et al. (2015) and Levin and Garcia (2017) to incorporate a longer follow-up period based on more recent data.

The paper addresses the following questions: Over an eight-year follow-up period, what were ASAP’s effects on educational outcomes and financial aid? What was the cost of formal education for students offered ASAP? How much more was this cost compared with that for students not offered ASAP? How much additional revenue does ASAP generate for CUNY through its positive effect on the number of credits students attempt? Finally, what are ASAP’s possible benefits to the students offered it and society?

Throughout the eight-year follow-up period, much of ASAP’s effect on associate’s degree receipt persisted, indicating that the program not only helped some students graduate faster, but also helped some students who would never have graduated without the program earn a degree. ASAP also led to increases in the amount of financial aid students received. The findings presented in this paper show that CUNY spent an additional $13,838, on average, per student to provide ASAP services during the first three years of the program and to cover any additional

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10Miller, Headlam, Manno, and Cullinan (2020).
Credits students attempted after the end of the program. However, a portion of the cost was offset by increased tuition and state revenue for the additional credits attempted by ASAP students. Taking this revenue into account, CUNY spent an additional $12,769, on average, for ASAP students compared with what they would have spent in the absence of the program. The cost-effectiveness analysis shows that CUNY spent, on average, an additional $9,162 per degree completion for students offered ASAP compared with their control group counterparts. The government also invested more in students through the Federal Pell Grant Program and TAP. These specific investments resulted in more degrees earned per Pell Grant and TAP dollar invested.

Colleges planning to replicate ASAP will need additional funding to cover the costs required to run the program and thereby increase student graduation rates. This paper discusses strategies that some colleges have used to fund ASAP replication programs while reducing costs.

Background

CUNY, the nation’s largest urban public university system, designed and implemented ASAP and currently offers it in nine CUNY colleges. ASAP is one of the most ambitious efforts in the country to improve the success rates of low-income postsecondary students. Launched in 2007 with funding from Mayor Michael Bloomberg’s Center for Economic Opportunity, the program was designed to substantially increase the proportion of students who graduate and to help them do so in less time. The sooner an individual attains a degree, the sooner the person can reap the economic and other benefits of that degree. ASAP requires students to attend college full time and provides a rich array of support and services for three years. In order to expand the number of students served by CUNY’s ASAP, the program has been tweaked since the study described here was conducted, and the cost per student has come down. At the time MDRC studied the program (two cohorts entering in fall and spring of 2010), it included the following key components.

- **Requirements and messages.** Students are required to attend college full time during the fall and spring semesters and are encouraged to complete developmental education early and to graduate within three years.

- **Student services.** Students receive comprehensive advisement from an ASAP-dedicated adviser with a small caseload, career information from an ASAP-dedicated career and employment services specialist, and ASAP-dedicated tutoring services separate from the usual college tutoring services.

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11Since the program led to more students staying in school and taking additional credits, the college increased its revenue from the portion of those students’ tuition covered by federal and state financial aid.

12New York State Division of the Budget (2019a).

13City University of New York (2019b). Starting in 2015, CUNY has been offering the Accelerate Complete Engage (ACE) program, which was modeled after ASAP program, at two senior colleges to help students complete their bachelor’s degree.
Course enrollment. Students enroll in blocked or linked courses in their first year. Students also enroll in an ASAP seminar covering topics such as setting goals, study skills, and academic planning. Students can register for courses early so that they can create convenient schedules and get seats in the courses they need.

Financial supports: Students receive a tuition waiver that fills any gap between financial aid and school tuition and fees. Students also receive free use of textbooks and free MetroCards for use on public transportation.

ASAP’s goal is to help students remove barriers to full-time study and complete their associate’s degree within three years. For more information on the current CUNY ASAP model, see: www.cuny.edu/asap.

Evaluation Design and Sample Characteristics

MDRC’s study used a rigorous random assignment design to estimate the effects of ASAP on students’ academic outcomes, including enrollment, credits attempted, and graduation, over eight years. The evaluation took place at three of CUNY’s community colleges that offered ASAP when the study began: Borough of Manhattan Community College, Kingsborough Community College, and LaGuardia Community College. Students were eligible to be in the study if they met the following criteria:

- Their family’s income was below 200 percent of the federal poverty level or eligible for a Pell grant.
- They needed one or two developmental courses.
- They were new students or continuing students who had earned 12 credits or fewer and had at least a 2.0 grade point average.
- They were New York City residents.
- They were willing to attend college full time.
- They were in an ASAP-eligible major. (The colleges excluded a few majors that have requirements that make graduating quickly difficult.)

Those who met the ASAP eligibility criteria were assigned, at random, to the program group or the control group. Members of the program group were offered ASAP program services, while those in the control group were not eligible for ASAP services. The support and services offered to the control group were those generally available in the community colleges.

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14The excluded majors at the time were Allied Health Sciences, Pre-Clinical Nursing, Forensic Science, Engineering Science, and Nursing.
Differences in post-random assignment outcomes between the program and control groups are an estimate of the effect, or impact, of the program.

**Description of the Sample**

The majority of participants in the study were women. (See Table 1.) Over half (57 percent) were 19 years of age or younger when they entered the study and another one-fourth (26 percent) were between 20 and 24 years of age. The ASAP study sample was younger than the overall college population (not shown); this is not surprising since ASAP targets new and relatively new students. Only a small minority of the students in the study had any children when they entered the study, and most lived with their parents. A total of 44 percent of sample members identified themselves as Hispanic, 34 percent as black, and 10 percent as white.15

**Data Sources**

This paper uses data from several data sources. All students were required to complete a baseline survey prior to random assignment, which provided demographic and other information. With permission from study participants, CUNY provided MDRC with information on students’ academic outcomes and financial aid receipt from its Institutional Research Database (IRDB). These records include transcript and financial aid data from all colleges in the CUNY system. These data were used to estimate the program’s effect on students’ progress in college and how much individuals received in financial aid after they entered the study. MDRC also used data from the National Student Clearinghouse (NSC), which collects and distributes enrollment and degree and certificate attainment data for more than 98 percent of the nation’s college students. These data were collected for all sample members and combined with data from CUNY’s IRDB to determine their enrollment and degree receipt at any college in the United States.

For the cost analysis, the CUNY Central ASAP office provided expenditure data for the three colleges that were part of the study. In addition, MDRC collected data from the Integrated Postsecondary Education Data System (IPEDS), a system of interrelated surveys conducted annually by the U.S. Department of Education’s National Center for Education Statistics that gathers information from every college, university, and technical and vocational institution participating in federal student financial aid programs. The IPEDS data contains the annual credit hours attempted as well as information on the operating budgets at CUNY colleges. This information, in combination with the transcript records mentioned above, was used to estimate the educational cost, described later, for both the program and control group members.

**ASAP’s Effects on Educational Outcomes**

This section summarizes ASAP’s impact on educational outcomes, including enrollment, credits attempted, and graduation over an eight-year period. As noted earlier, ASAP’s goal was to

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15See Scrivener et al. (2015) for more information on the study sample, the study enrollment process, and information on baseline similarity between the research groups.
increase three-year graduation rates in community colleges and for students to obtain their degree more quickly.

Figure 1 presents ASAP’s effects on enrollment in community (associate’s degree-granting) and senior (bachelor’s degree-granting) colleges over 16 semesters (eight years) following random assignment. During the first four semesters, ASAP reduced dropout rates at community colleges; the enrollment rates for ASAP students were significantly higher compared with the rates for students in the control group. Starting in Semester 6, enrollment in community colleges was lower for program group members than control group students, given that the former earned associate’s degrees and enrolled in senior colleges at higher rates. Between Semesters 6 and 10, control group members were enrolled in community colleges at higher rates as some caught up, and the enrollment rates for both research groups were about the same from Semester 11 through the end of the follow-up period. Likewise, members of both groups were enrolled in senior colleges at very similar rates starting in Semester 12, at around 20 percent. At the end of the eight-year period, about 3 percent of both research groups were enrolled in community colleges and about 15 percent of both groups were enrolled in senior colleges.

Figure 2 shows the program’s effects on the credits that ASAP and control group students attempted at CUNY community colleges. As expected, the average credits attempted decreased over time for both research groups, as many students graduated or dropped out of school. Similar to the enrollment trends described above, ASAP had a large positive effect on the credits attempted in each of the first four program semesters, which subsequently diminished during Semester 5. Starting in Semester 6, the impacts were generally negative and are statistically significant during Semesters 7 through 9. This indicates that slightly more control group members were attempting more credits at community colleges in this period compared with ASAP students, as the former began to catch up to the latter. Cumulatively, over the eight-year period, ASAP students attempted seven more community college credits than their control group counterparts (not shown).

Figure 3 shows the program’s effects on the credits that students attempted at CUNY senior colleges. A larger percentage of program members attempted credits at senior colleges beginning in the third year after study enrollment. However, control group members eventually enrolled in four-year colleges and caught up to the program group members.

By the end of Year 3, ASAP increased degree receipt (including associate’s and bachelor’s degrees) by 18 percentage points, from 22 percent of the control group to 40 percent of the program group.\footnote{Scrivener et al. (2015).} Figure 4 presents the program’s effects on degree receipt broken out by associate’s and bachelor’s degrees, over eight years (16 semesters). The top panel presents trends in degree receipt for both research groups, and the second panel presents the program’s estimated effects. More ASAP students earned associate’s degrees over the eight-year follow-up period. The estimated effects on this outcome were stable in Semesters 10 through 16, at about 12 percentage points.
In terms of bachelor’s degrees, about 25 percent of both research groups had earned one by the end of Year 8. The program led to small increases in Semesters 8 through 10, but showed no effects thereafter. The findings suggest that the program’s main effect on bachelor’s degrees was to help some students, who would have obtained this degree, earn it quicker. Note that ASAP’s primary goal was to help students obtain associate degrees. We examine bachelor’s degree attainment since it is possible that ASAP could have spillover effects on this outcome.

In contrast, the stability of the impact on associate’s degree receipt shows that ASAP’s greatest effect was to increase degree receipt among students who would not have earned an associate’s degree otherwise. Another effect of the program was to help many students earn their associate’s degree more quickly.

**Findings on Financial Aid Receipt**

Financial aid is a critical resource for students in low-income households, helping them to enroll in college and cover tuition and other expenses. Financial aid has also been found to be associated with students’ persistence in college and degree attainment. For community colleges, it is a source of revenue through tuition and fees. This section examines the effects of ASAP on different types of financial aid. Since ASAP’s explicit goal is to help students earn an associate’s degree, the analysis focuses on financial aid awarded to students attending associate’s degree-granting institutions.

The primary need-based financial aid program for college students in the United States is the Federal Pell Grant Program. Pell Grant amounts are based on the amount of money that a family is expected to contribute and the intensity of students’ attendance (as determined by the number of credits students attempt). In addition, many states provide need-based grants to state residents who attend postsecondary institutions within the state. New York State’s Tuition Assistance Program (TAP) is among the most generous state-funded financial aid programs. TAP generally requires that students matriculate full time during their first year in order to be eligible for a full-time or part-time grant in subsequent years. The more credits students attempt at a college, the higher the financial aid amount.

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17P-values range from 0.08 to 0.05.
18For more information on the long-term impacts of the ASAP program, see Miller and Weiss (under review).
21McFarland et al. (2019).
23For further details about TAP eligibility, see New York State Higher Education Services Corporation (2019a). TAP is also available to students attending colleges on a part-time basis (New York State Higher Education Services Corporation, 2019b).
CUNY’s ASAP enabled students to receive greater financial aid. Table 2 shows ASAP’s estimated effects on financial aid receipt at community colleges.24 In addition, the table includes the 90 percent confidence intervals for each impact estimate to indicate the level of the uncertainty associated with it. Over the eight-year period, the average total financial aid award for program group members was $14,349, compared with $13,223 for the control group members — an 8.5 percent increase of $1,126 above the control group amount (p = 0.0614).25 The increases in the amount of financial aid awarded were driven by increases in the grant amounts that students received from Pell and TAP, and not loans, which need to be repaid. The Pell Grant amount for program group members was about 7 percent higher than the control group members’ average grant amount of $8,793. The TAP grant amount for program group members was 14 percent higher than the control group members’ grant amount of $3,183.

The amounts received from subsidized and unsubsidized loans are similar between the research groups. Overall, only a small percentage of students in both research groups took out loans. By the end of the follow-up period, only about 6 percent of students had received an unsubsidized loan and 12 percent had received a subsidized loan (not shown).

Figure 5 shows the effects of ASAP on the average amount of financial aid awarded to students attending community colleges over the eight-year follow-up period. ASAP students received more financial aid than control group members during the first five semesters as students were more likely to enroll, enroll full-time, and take more credits. The effects decreased over time as program group members earned their associate’s degree. At the end of the follow-up period, less than 2 percent of both research groups were receiving financial aid (not shown).

Appendix Table A.1 shows the effects on financial aid at senior colleges. As shown, over the eight-year period, the average total amount of financial aid received by both research groups were similar. Program group students, however, received a larger amount of aid from TAP, compared with control group members.

ASAP offered students assistance with their financial aid applications and required full-time attendance throughout the program, except for the penultimate and last term prior to graduation. These features of the program helped students take full advantage of the financial aid available to them while bringing the cost of the program to CUNY down through the added revenue from tuition and fees.

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24Money that students received through the student tuition waiver described earlier is not included in these results. The results in this section only pertains to aid received from Pell, TAP, and loans.

25Because of missing information, the financial aid outcomes were calculated based on the total awarded amount instead of disbursement amounts. An analysis of the data showed that most awarded amounts were equal to the disbursed amounts. Therefore, using the awarded amounts should not make a difference in the results.
The Cost of ASAP

An earlier MDRC report presented the cost of ASAP after three years of operation, or the duration of the program.26 This section extends the cost analysis to five years after the end of the program or over an eight-year period since the beginning of the study. Although ASAP only lasts three years, the community colleges can continue to incur costs as a result of post-program enrollment patterns. The present longer-term analyses consider these costs for both research groups. While the eight-year timeframe was chosen based on the availability of data, it turned out to be useful since the net costs (that is, the difference in costs between the program and control groups) and the effects on academic outcomes had stabilized by this point in time. The focus of these analyses are the costs incurred by CUNY’s community colleges. Appendix Figure A.1 provides information on the costs incurred by CUNY’s senior colleges.27

How Were the Costs Estimated?

The costs were broken into two broad categories: program costs and regular educational costs.

Program Costs. Program costs are those costs associated with ASAP’s specific services during the three years students were offered the program (for instance, program management, advising, tutoring, the tuition waiver, textbook voucher, and so on). In other words, the program costs include all the additional services that participating students would not have otherwise received. Program costs were derived from CUNY budgets, which were provided to MDRC by the CUNY Central ASAP office. The program’s cost per student was calculated by taking the total cost of the program during the three years in which program services were provided and dividing it by the number of students assigned to the program group. Program costs do not apply to students in the control group, who were not offered ASAP.

Regular Educational Costs. Regular educational costs represent the costs associated with all the regular courses and services that students use. To calculate the regular educational costs, the number of credits each student attempted was multiplied by the cost per credit attempted at the college the student attended.28 The cost per credit attempted was derived from data from IPEDS. (This makes these values transparent and replicable.)29 Specifically, each college’s total

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26Scrivener et al. (2015).

27These estimates include the cost for graduate credits, which may inflate the overall cost for both research groups.

28Since the cost of credits attempted in a senior college is higher than the cost of credits attempted in a community college, the cost was calculated separately based on the type of CUNY school students attended. Cost information for students attending non-CUNY schools was not calculated. According to NSC data, only about 10 percent of program and control group students attended a non-CUNY school during the eight-year follow-up period.

29To ensure transparency, estimates were based on financial and enrollment data as reported by IPEDS. One limitation of this approach is that all credits attempted in each college were treated as costing the same amount, which is not the case. Course costs vary. However, the process of random assignment helps ensure that any differences in the cost of credits attempted are likely similar in both research groups because they mostly took
expenses and deductions were divided by the college’s total number of credit hours to estimate the cost per credit attempted. The cost per credit attempted was calculated separately for each college for each year. An average cost per credit was then calculated for all community colleges for each year and weighted based on the number of credits attempted by students at each college.

During the three years that program services were provided, a lower cost per credit was used for program group members compared with control group members. For program group members, costs associated with academic support and student services were excluded when calculating the cost per credit attempted. These costs were excluded based on the assumption that program group students made little use of these services since they instead had access to ASAP’s advisors, tutors, and so on, which were accounted for in the program costs.

Results of the Cost Estimates

Program Costs. As described earlier, ASAP provided a rich array of services to students for three years, which resulted in significant increases in students’ persistence in college and graduation rates. Table 3 shows the cost for the different program components. The total amount was equal to $15,292.30. Administration and staffing costs accounted for about 45 percent (or $6,800) of the program costs, and the financial support provided to students (primarily the monthly transportation pass and textbooks) made up about 24 percent (or $3,603). Student services such as advising, career and employment services, and tutoring accounted for almost 21 percent (or $3,191) of the program costs. The remaining 11 percent of the costs were for the ASAP seminar and blocked courses.

It should be noted that MDRC’s evaluation focused on the ASAP model offered in 2010. CUNY now offers ASAP at a much larger scale, and some of the program features have been modified, which has resulted in reductions in the overall program costs. For example, starting in 2013, CUNY adopted a structured triage model for advising based on student need and it has replaced the ASAP seminars with group advisement sessions. As a result of program modifications and economies of scale, CUNY reports that the average program costs of providing ASAP are now $3,440 per student a year, and CUNY’s internal analyses have found that the program continues to have positive effects on persistence and graduation rates.31

The ASAP replication in Ohio has also found that their ASAP programs have produced similar effects on educational outcomes as did the original model, at a lower cost.32 With technical

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30 All costs in this paper are calculated in 2019 dollars, so estimates do not match those in the three-year report.

31 Strumbos and Kolenovic (2017); Strumbos, Linderman, and Hicks (2018).

32 Miller, Headlam, Manno, and Cullinan (2020)
assistance from CUNY, the Ohio programs adopted CUNY’s triage approach to advising, in which advising requirements differ depending on the students’ assessed level of need. The Ohio colleges also did not formally implement blocked scheduling. Finally, in terms of financial support, Ohio colleges provided a tuition waiver, a $50 gas or grocery gift card, and payment assistance for textbooks. These differences did not meaningfully diminish the effects on educational outcomes. Findings from recent research indicate that the programs in Ohio increased graduation rates and helped students earn their degrees faster. The cost of the programs in Ohio was $5,521 per student over three years, or $1,840 per year.

**Regular Educational Costs.** In addition to ASAP’s program costs, CUNY incurs costs for all the regular courses and services that are provided to all students regardless of ASAP — for instance, the cost of buildings, college administration, instructors’ salaries, and other services to which all students have access. As described earlier, the various costs of providing education can be captured in the cost per credit, which the research team estimated using IPEDS data. Figure 6 shows that over the eight years, on average, CUNY spent an estimated $29,885 educating control group members and $43,723 ($15,292 plus $28,431) educating program group members.

Comparing just the cost of education, which makes up most of the total cost, CUNY’s community colleges on average spent $1,454 less per ASAP student over the eight years ($28,431 minus $29,885), even though ASAP students attempted more credits, on average, during this period. This is based on the assumption that the cost per credit was lower for ASAP students for the first three years, since some of the student services were covered by the program and thus were included in the program cost calculations.

Taking both ASAP’s program costs and the regular costs of education into account, CUNY, on average, spent an additional $13,838 per program group member ($43,723 minus $29,885) over the eight-year period. The additional cost represents a 46 percent increase over the control group cost. All of this increase is due to the cost of running the program, incurred during the three years when program services were provided.

**Revenue ASAP Generated for CUNY**

Over eight years, ASAP caused students to attempt an additional seven credits at CUNY’s community colleges. The additional credits taken by ASAP students generated revenue for CUNY, offsetting some of the program costs. This revenue came from state funding and tuition, which are tied to credits attempted. Using information that CUNY provided to MDRC, the research team estimated that the additional revenue generated by ASAP students for CUNY’s

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33 Miller, Headlam, Manno, and Cullinan (2020).
34 Unlike in Scrivener et al. (2015), the present research team assumed a lower cost per credit for all credits taken by program group members at ASAP community colleges while the program provided services. This was done to prevent counting twice services that both the colleges and ASAP offered. Thus, the cost per credit for program students during the first three years was lower than the cost per credit for control group members during this same period.
community colleges equaled $1,069, on average, for each student during the eight-year period.\textsuperscript{35} Therefore, the additional cost per student, to CUNY, of providing ASAP was about $12,769 ($13,838 minus $1,069) over the amount spent per student educating control group members.

**ASAP Cost Over Time**

Figure 7 presents the average cost per student at the community colleges for the program and control groups for each year of the follow-up period. For program group students, the cost estimates included the cost of operating ASAP and the cost of credits attempted per student at community colleges.\textsuperscript{36} For control group students, the cost estimates included only the cost of credits attempted per student at community colleges.

As shown in the figure, the per-student cost declined for both research groups sharply one year after study entry, as many students stopped enrolling in college or attempted fewer credits. The figure also shows a large difference in per-student cost between research groups during the first three years, driven by the cost of operating ASAP. The Year 1 average cost for the program group student was $20,306, compared with the average cost for the control group of $13,082, resulting in a difference of $7,223 (not shown). In Year 2, the average cost for the program group was $14,254, compared with the average cost for control group students of $9,094, resulting in a difference of $5,160 (not shown). During the last program year, the average program group cost was only $6,487, compared with the control group average cost of $4,027 for a difference of $2,460 (not shown). Through three years, the average cost per program group student was $41,046 and the average cost per control group student was $26,203, for a net cost of $14,843. (See Table 4.)

The program group’s per-student cost continued to decrease sharply after the program ended, as more students graduated or no longer enrolled at community college. The control group’s per-student cost was significantly higher than that of the program group in Years 4 and 5, as control group members were enrolled in community colleges at slightly higher rates compared with program group members. The average cost for program students during Year 4 through Year 8 was $2,677, compared with the control group average cost of $3,681 (not shown), representing $1,004 in post-program savings. By the end of the eight-year follow-up period, the

\textsuperscript{35}According to CUNY, in 2019, the state-based aid to the community college equaled $98.23 per credit attempted for full-time students. Note that the part-time credit amount was not available, and thus the estimates used the full-time credit amount. City appropriations are fixed amounts based on the annual budget process and do not vary by credit earned or attempted. For in-state, full-time students at CUNY’s community colleges, the tuition per semester was $2,400. (Full-time status is attempting 12 to 18 credits per semester.) In-state, part-time students paid $210 per credit. Estimates did not include additional revenue provided by the City of New York.

\textsuperscript{36}The direct cost was applied to program group members based on the number of credits they attempted and enrollment rates. First, the average direct cost was put in 2019 dollars and distributed across the first three years using the original proportions from the three-year study (47 percent in Year 1, 32 percent in Year 2, and 21 percent in Year 3). Then, for each year, an “individual” estimate was calculated that would result in the same yearly average, but that would vary the direct cost for students based on the number of semesters in which they attempted credits (no cost amount for zero semesters, half the estimated amount for one semester, and the full amount for two semesters).
marginal per-student costs for both groups were very similar. Cumulatively, over eight years, the net cost of the program was around $13,800.

Cost-Effectiveness

This section examines the relationship between the additional resources required to operate ASAP and the resulting increase in graduation rates. It does so by comparing the cost per associate’s degree earned for ASAP group members and control group members. It also examines whether ASAP changed the cost per degree earned from the vantage point of the Pell Grant Program and TAP.

Community College Perspective

As noted above and shown in Table 4, on average, CUNY spent an additional $13,838 per program group member over the eight-year period. With respect to academic outcomes, this additional investment resulted in a 12-percentage point increase in the number of students earning an associate’s degree over eight years. These students would not have earned that associate’s degree otherwise. In addition, many students completed their degrees faster. Weiss et al. (2019) estimate that the first 41 percent of ASAP students who earned a degree obtained it about one year earlier than the first 41 percent of control group students who earned a degree, on average.

Table 4 presents the cost-effectiveness of ASAP over a three- and eight-year follow-up period. As noted above, the total cost of ASAP per program group member over the course of the three-year program was $41,046 compared with the $26,203 cost to educate the average control group member. Over three years, the net cost was $14,843 per person. At the end of the third year, ASAP increased the likelihood of earning an associate’s degree by around 18 percentage points, from 22.1 to 40.0 percent. The average cost per associate degree for program group members was $102,558 ($41,046 divided by 40.0). The average cost per associate degree for control group members was $118,382 ($26,203 divided by 22.1). At three years, ASAP lowered the cost per degree earned by $15,824 (or 13 percent). While important, these results provide an incomplete picture of both the total costs incurred by the college and the total associate degrees earned by the students, since some students continued to attempt credits and obtain degrees after the three-year period.

As shown in Table 4, the increase in cost to community colleges for educating students was low after the first three years. Over the eight-year period, the total cost of ASAP per program group member was $43,723, compared with the $29,885 cost to educate the average control group member. Simultaneously, the percent of students who earned an associate’s degree increased substantially after the first three years. Over the eight-year period, 52 percent of program group members graduated compared with almost 40 percent of control group members. The average cost per associate’s degree earned for the program group is $84,087 versus $74,925 for the control group.

37As noted in footnote 35, the three-year cost estimates presented in this paper are slightly different from the estimates in Scrivener et. al (2015) due to changes in how the cost per credit was calculated for program group members while the program was operating.
for a difference of $9,162. The cost per degree earned decreased considerably after the program ended in Year 3 as more students earned a degree in later years, while overall spending was low since many students dropped out, graduated, or enrolled in senior colleges. After eight years, ASAP is no longer cost-effective in terms of the cost per associate’s degree.

There are several reasons why the cost per degree earned is no longer lower for program group students compared with control group students. First, as shown in Figure 4, the control group began to catch up after the program ended. By the end of the eight-year follow-up period, the estimated effect on earning an associate’s degree was 12 percentage points, a decrease of 6 percentage points from what it was after three years of follow-up. Second, as students in the program and control groups continued to earn degrees, the percent increase in graduation rates declined from 81 percent (an 18 percentage point impact above the control group’s graduation rate of 22 percent) after three years to 30 percent (a 12 percentage point impact above the control group’s graduation rate of 39.9 percent) after eight years. Somewhat counterbalancing these first two points, as the cumulative total cost per student grew over time, the percentage increase (comparing the program group with the control group) in total cost went down from 57 percent after three years to 46 percent after eight years. In the end, ASAP increased graduation rates by 30 percent, while costing 46 percent more per student.

It is worth remembering what the additional investment in students yielded. ASAP managed to help a group of students earn a degree who, in the absence of the program, would not have graduated. Compared with students who would earn a degree with or without the program, this group of students faces more barriers and requires extra support to complete their degrees. Therefore, it makes sense that it might cost more money to graduate these would-be non-degree earners.

**Pell Grant Program and TAP Perspective**

As noted earlier, the federal and state governments invest in students’ education by providing grants to undergraduate students who demonstrate financial need. In 2018-2019, the federal government awarded $28.2 billion in Pell Grants to 6.8 million recipients.\(^{38}\) In 2015-2016, New York State expended more than $956 million in TAP grants to help cover students’ college tuition costs — with an average annual award of $3,302 per recipient.\(^{39}\) Ensuring that the dollars invested are used efficiently should be a priority for colleges and government. The bottom rows in Table 4 presents ASAP’s cost-effectiveness from the vantage point of the Pell Grant Program and TAP. As shown earlier, ASAP increased the Pell and TAP grant amounts that students received by almost 7 percent and 14 percent, respectively. Although the federal and state governments provided larger grant amounts to program group members, their investment per degree earned was lower for program group members compared with control group members, making ASAP cost-effective from the Pell Grant Program and TAP vantage point. For example, based on what the Pell Grant Program invested in students in both research groups, the cost per

\(^{38}\)Baum, Ma, Pender, and Libassi (2019).

\(^{39}\)New York State Division of the Budget (2019b).
associate’s degree earned for the program group was 18 percent less than what it was for the control group. Based on TAP grant amounts, the cost per associate’s degree was 12 percent less for the program group than it was for the control group.

**ASAP’s Benefits**

The cost-effectiveness findings described above are limited in that they do not consider the potential non-academic benefits of the program. While the present study did not examine data on earnings, employment, and other outcomes, this section considers some of the possible positive benefits that may result from ASAP’s effects on educational outcomes. As noted earlier, a larger percentage of ASAP students who would not have otherwise graduated earned an associate’s degree. Earning an associate’s degree may be financially valuable to students. According to the Bureau of Labor Statistics, the median weekly earnings in 2018 for someone with some college but no degree was $802, while it was $862 for someone with an associate’s degree.40 Thus, the estimated annual earnings for a high school graduate with some college and no degree was $41,704, compared with $44,824 for a college graduate with a two-year degree.41 Assuming that the associate’s degree has labor market value, ASAP likely had some effects on earnings, since it increased degree completion. In addition, jobs obtained by people with a college degree may be of higher quality, offering fringe benefits, than jobs obtained by people without postsecondary education.

ASAP students also obtained their degrees faster, on average, than control group members. By earning their associate’s degree more quickly, students are able to enter the labor market sooner and earn higher wages before other students who take longer to complete their degree. More ASAP students also enrolled in a senior college and did so sooner, which may likewise contribute to higher earnings for program group members.

There are many other potential benefits and costs of the program. Some benefits could be measured by reductions in public benefits associated with gainful employment. Others such as job satisfaction are not so easily measured. Levin and Garcia (2017) conducted a benefit-cost analysis of the ASAP program, which projected a wide range of potential benefits (all resulting from increased degree attainment over three years) from the student’s and taxpayer’s perspectives. The findings were positive. Importantly, however, some of the assumptions in this earlier analysis (such as the assumption that the three-year graduation effects would be sustained in perpetuity) should be revised based on new data that were not available at the time. The use of administrative data (such as data for labor market outcomes), rather than projections, for instance, could produce more accurate estimates. This task, unfortunately, is beyond the scope of the current paper.

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40Torpey (2019).

41The weekly earnings were multiplied by 52 weeks to estimate the annual earnings.
Funding Gap

ASAP is a comprehensive program that addresses multiple barriers that students face. These services, such as extra financial assistance and intensive student counseling, are designed to help students succeed. A substantial monetary investment is needed for community colleges to provide these comprehensive services. For colleges not part of the CUNY system considering replicating ASAP, how to fund the program is an essential question to raise. This section examines how other colleges have been able to cover program costs.42

As discussed earlier, some of the ASAP costs were offset by revenue from tuition and fees derived from program group students taking additional credits. In Ohio, where ASAP was replicated, state funding awarded to colleges for improved performance also provided additional revenue.43 It has been estimated that revenue from performance-based funding could offset two-thirds of the program’s cost.44 However, even when taking this revenue into account, colleges considering replicating ASAP will still need to find additional funding to cover the program costs.

Some colleges have secured philanthropic funding to pilot programs. This funding has been used to cover the initial costs of providing ASAP. Once programs are at a steady state and begin to recoup some of the program costs from increases in revenue, the colleges should need to raise less money to cover the program costs. However, philanthropic commitments are often limited, and scaling the program with just these funds may be difficult to do.

Other colleges have explored how to leverage government dollars to help fund the program. Public funding would have the most impact on program sustainability. CUNY, for example, was successful in securing substantial resources from New York City and the State of New York. In Ohio, Lorain County Community College has collaborated with state and county social service agencies to identify ways to combine private and public funding in order to expand the program. For example, the college explored leveraging Temporary Assistance for Needy Families and Workforce Innovation and Opportunity Act funding to help cover the cost of the financial support offered to eligible students.45 From 2016-2018, Skyline College in California piloted Promise Scholars Program, which was modeled after ASAP, using a philanthropic commitment. After the pilot program showed positive results, Skyline applied for and received state funding to support the program and to expand it to five colleges across California.46 The California Community Colleges Board of Governors awarded the grant.

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42For additional information on how other colleges have been able to replicate the program, see City University of New York (2019a).
43The State of Ohio awards funding to colleges per degree, certificate, and credit that students earn; per student who transfers to a four-year college, and per student who reaches certain credit benchmarks (12, 24, and 36 credits). It also provides additional money when at-risk students reach these milestones. Miller, Headlam, Manno, and Cullinan (2020).
44Miller, Headlam, Manno, and Cullinan (2020).
45Headlam (2018); Fogel (2019).
Conclusion

A large percentage of low-income students who enroll in associate’s degree programs fail to graduate. ASAP provides structure and support to students for up to three years to overcome barriers to graduation. After eight years, ASAP’s positive effects on graduation rates persisted, affirming that the program was successful in helping students who would have never graduated without ASAP earn their degrees. ASAP’s effects are still the largest MDRC has found in any of its evaluations of community college reforms. The program also helped some students graduate more quickly and access more financial aid than they would have otherwise. The findings in this paper show that the program resulted in increased financial aid from the Pell Grant Program and TAP, and reduced the grant dollars these programs invested per degree earned.

Designed to remove multiple barriers to graduation, ASAP services are intensive and comprehensive. The cost of providing ASAP services was higher than the cost of the regular services. A small proportion of these costs was offset by increased revenue from tuition and state funding, derived from the additional credits ASAP students attempted. To reduce ASAP’s cost, colleges could make program modifications similar to those made by CUNY and colleges in Ohio. Colleges thinking about replicating ASAP will need to raise other public or private funding to cover the costs of offering ASAP.

The investment made in offering ASAP can help colleges reach their goals of helping students persist in and complete postsecondary education. The large dropout rates in community colleges is indicative of how difficult it is for low-income students to earn their degrees. Colleges and government agencies that are strongly committed to improving graduation rates and improving the lives of low-income students should consider ASAP or similar programs. If the government is serious about increasing the number of college-educated Americans, investing in an evidence-based program such as ASAP is a good way to put taxpayer money to work to achieve this goal.
References


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City University of New York. 2019b. “CUNY ASAP.” Website: www1.cuny.edu/sites/asap/


Miller, Cynthia, Camielle Headlam, Michelle Manno, and Dan Cullinan. 2020. *Increasing Community College Graduation Rates with a Proven Model: Three-Year Results from the Accelerated Study in Associate Programs (ASAP) Ohio Demonstration.* New York: MDRC.


Scrivener, Susan, Michael J. Weiss, Alyssa Ratledge, Timothy Rudd, Colleen Sommo, and Hannah Fresques. 2015. *Doubling Graduation Rates: Three-Year Effects of CUNY’s Accelerated Study in Associate Programs (ASAP) for Developmental Education Students.* New York: MDRC.


Exhibits
### Table 1
Sample Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Study Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (%)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>62</td>
</tr>
<tr>
<td>Age (%)</td>
<td></td>
</tr>
<tr>
<td>19 years or younger</td>
<td>57</td>
</tr>
<tr>
<td>20 to 24 years</td>
<td>26</td>
</tr>
<tr>
<td>25 years or older</td>
<td>17</td>
</tr>
<tr>
<td>Average age (years)</td>
<td>21</td>
</tr>
<tr>
<td>Race/ethnicitya (%)</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>44</td>
</tr>
<tr>
<td>White</td>
<td>10</td>
</tr>
<tr>
<td>Black</td>
<td>34</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>8</td>
</tr>
<tr>
<td>Otherb</td>
<td>5</td>
</tr>
<tr>
<td>Living with parents (%)</td>
<td>74</td>
</tr>
<tr>
<td>Has children (%)</td>
<td>15</td>
</tr>
<tr>
<td>First person in the family to attend college (%)</td>
<td>30</td>
</tr>
<tr>
<td>Credentials earnedc</td>
<td></td>
</tr>
<tr>
<td>High school diploma</td>
<td>74</td>
</tr>
<tr>
<td>General Education Development (GED) certificate</td>
<td>21</td>
</tr>
<tr>
<td>Currently employed (%)</td>
<td>31</td>
</tr>
<tr>
<td>Currently employed full time d (%)</td>
<td>26</td>
</tr>
<tr>
<td>Sample size</td>
<td>896</td>
</tr>
</tbody>
</table>

**SOURCE:** MDRC calculations using baseline information form data and the CUNY Institutional Research Database (IRDB).

**NOTES:** Distributions may not add to 100 percent because of rounding. Missing values are included in variable distributions only for characteristics with more than 6 percent of the full sample missing.  

* Respondents who said they were Hispanic and chose a race are included only in the "Hispanic" category.  

* The "Other" category includes Native American/Alaska Native, multiracial, and other races and ethnicities.  

* Distributions may not add to 100 percent because categories are not mutually exclusive. Percentages do not add up to 100 because some respondents earned an occupational technical certificate or other degree.  

* Working full time is defined as working 31 hours or more per week.
Table 2

Program Effects on Financial Aid Outcomes at Community Colleges

<table>
<thead>
<tr>
<th>Outcome ($)</th>
<th>Program Group</th>
<th>Control Group</th>
<th>Difference (Impact)</th>
<th>Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial aid provided(^a)</td>
<td>14,349</td>
<td>13,223</td>
<td>1,126 *</td>
<td>[137.1, 2114.8]</td>
</tr>
<tr>
<td>Federal aid (Pell)</td>
<td>9,393</td>
<td>8,793</td>
<td>600 *</td>
<td>[29.0, 1170.8]</td>
</tr>
<tr>
<td>State aid (TAP)</td>
<td>3,641</td>
<td>3,183</td>
<td>459 ***</td>
<td>[167.1, 750.5]</td>
</tr>
<tr>
<td>Subsidized loans</td>
<td>599</td>
<td>519</td>
<td>80</td>
<td>[-144.8, 304.2]</td>
</tr>
<tr>
<td>Unsubsidized loans</td>
<td>456</td>
<td>282</td>
<td>174</td>
<td>[-42.5, 389.7]</td>
</tr>
</tbody>
</table>

Sample 451 445

SOURCE: MDRC calculations from the CUNY Institutional Research Database (IRDB).

NOTES: Rounding may cause slight discrepancies in sums and differences.
A two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Estimates are adjusted by random assignment blocks and select baseline characteristics.
The confidence interval (CI) shows the 90 percent CI around each impact estimate.
\(^a\)This measure includes other types of aid not shown in the table including work-study.
<table>
<thead>
<tr>
<th>Program Component</th>
<th>Cost ($)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Administration and staffing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>3,540</td>
<td>23.1</td>
</tr>
<tr>
<td>Research and evaluation</td>
<td>1,255</td>
<td>8.2</td>
</tr>
<tr>
<td>Other</td>
<td>2,005</td>
<td>13.1</td>
</tr>
<tr>
<td>Subtotal</td>
<td>6,800</td>
<td>44.5</td>
</tr>
<tr>
<td><strong>Student services</strong></td>
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<td></td>
</tr>
<tr>
<td>Advising</td>
<td>1,912</td>
<td>12.5</td>
</tr>
<tr>
<td>Career and employment services</td>
<td>620</td>
<td>4.1</td>
</tr>
<tr>
<td>Tutoring</td>
<td>659</td>
<td>4.3</td>
</tr>
<tr>
<td>Subtotal</td>
<td>3,191</td>
<td>20.9</td>
</tr>
<tr>
<td><strong>Course enrollment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blocked or linked courses</td>
<td>1,485</td>
<td>9.7</td>
</tr>
<tr>
<td>ASAP seminar</td>
<td>212</td>
<td>1.4</td>
</tr>
<tr>
<td>Subtotal</td>
<td>1,698</td>
<td>11.1</td>
</tr>
<tr>
<td><strong>Financial supports</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MetroCards</td>
<td>1,906</td>
<td>12.5</td>
</tr>
<tr>
<td>Textbooks</td>
<td>1,206</td>
<td>7.9</td>
</tr>
<tr>
<td>Tuition waiver</td>
<td>491</td>
<td>3.2</td>
</tr>
<tr>
<td>Subtotal</td>
<td>3,603</td>
<td>23.6</td>
</tr>
<tr>
<td><strong>Total Direct Cost</strong></td>
<td>15,292</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table 3**

Direct Cost of ASAP per Student

*SOURCE:* MDRC calculations based on CUNY's ASAP expenditure data and the Higher Education Price Index.

**NOTES:**
- Tests of statistical significance were not performed.
- Rounding may cause slight discrepancies in sums and differences.
- Program costs are based on a steady state of operation that excludes external research and start-up costs.
- All costs are shown in constant 2019 dollars.
Table 4

Cost-Effectiveness Values

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Program Group</th>
<th>Control Group</th>
<th>Difference (Impact)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earned an associate’s degree (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At 3 years</td>
<td>40.0</td>
<td>22.1</td>
<td>17.9 ***</td>
</tr>
<tr>
<td>At 8 years</td>
<td>52.0</td>
<td>39.9</td>
<td>12.1 ***</td>
</tr>
<tr>
<td>Community College Perspective</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost per group member ($)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At 3 years</td>
<td>41,046</td>
<td>26,203</td>
<td>14,843</td>
</tr>
<tr>
<td>At 8 years</td>
<td>43,723</td>
<td>29,885</td>
<td>13,838</td>
</tr>
<tr>
<td>Cost per degree earned ($)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At 3 years</td>
<td>102,558</td>
<td>118,382</td>
<td>-15,824</td>
</tr>
<tr>
<td>At 8 years</td>
<td>84,087</td>
<td>74,925</td>
<td>9,162</td>
</tr>
<tr>
<td>Pell and TAP Perspective</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost ($)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal student direct aid (Pell)</td>
<td>9,393</td>
<td>8,793</td>
<td>600 *</td>
</tr>
<tr>
<td>State student direct aid (TAP)</td>
<td>3,641</td>
<td>3,183</td>
<td>459 ***</td>
</tr>
<tr>
<td>Cost per degree earned ($)</td>
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<td></td>
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</tr>
<tr>
<td>Federal student direct aid (Pell)</td>
<td>18,064</td>
<td>22,045</td>
<td>-3,981</td>
</tr>
<tr>
<td>State student direct aid (TAP)</td>
<td>7,003</td>
<td>7,979</td>
<td>-976</td>
</tr>
<tr>
<td>Sample</td>
<td>451</td>
<td>445</td>
<td></td>
</tr>
</tbody>
</table>

SOURCES: MDRC calculations using data from the CUNY Institutional Research Database (IRDB) and ASAP expenditure data, the National Student Clearinghouse (NSC), and financial and enrollment data from the Integrated Postsecondary Education Data System (IPEDS).

NOTES: Rounding may cause slight discrepancies in sums and differences. All dollar values have been rounded to the nearest whole dollar.
Tests of statistical significance have only been performed on outcome measures, not costs. All outcomes are cumulative over three years. For these measures, a two-tailed t-test was applied to differences between research groups. Statistical significance levels are indicated as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Estimates are adjusted by random assignment blocks and selected baseline characteristics.
All costs are shown in constant 2019 dollars.
### Appendix Table A.1

**Program Effects on Financial Aid Outcomes at Senior Colleges**

<table>
<thead>
<tr>
<th>Outcome ($)</th>
<th>Program Group</th>
<th>Control Group</th>
<th>Difference (Impact)</th>
<th>Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial aid provideda</td>
<td>7,483</td>
<td>6,650</td>
<td>833</td>
<td>[-468.2, 2133.9]</td>
</tr>
<tr>
<td>Federal aid (Pell)</td>
<td>3,736</td>
<td>3,327</td>
<td>409</td>
<td>[-203.4, 1020.8]</td>
</tr>
<tr>
<td>State aid (TAP)</td>
<td>1,866</td>
<td>1,517</td>
<td>350 *</td>
<td>[10.6, 688.6]</td>
</tr>
<tr>
<td>Subsidized loans</td>
<td>970</td>
<td>743</td>
<td>227</td>
<td>[-84.4, 537.8]</td>
</tr>
<tr>
<td>Unsubsidized loans</td>
<td>692</td>
<td>654</td>
<td>38</td>
<td>[-366.6, 442.7]</td>
</tr>
</tbody>
</table>

Sample 451 445

SOURCE: MDRC calculations from the CUNY Institutional Research Database (IRDB).

NOTES: Rounding may cause slight discrepancies in sums and differences.

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

Estimates are adjusted by random assignment blocks and select baseline characteristics. Confidence interval (CI) shows the 90 percent CI around each impact estimate.

*aThis measure includes other types of aid not shown in the table including work-study.
Figure 1
Program Effects on Community and Senior College Enrollment

SOURCES: MDRC calculations using data from the CUNY Institutional Research Database (IRDB) and National Student Clearinghouse (NSC).

NOTES: Estimates are adjusted by random assignment blocks and select baseline characteristics. Enrollment is based on courses in which students are still enrolled as of the end of the add/drop period.
Program Effects on Credits Attempted at Community Colleges

SOURCE: MDRC calculations using data from the CUNY Institutional Research Database (IRDB).

NOTES: Estimates are adjusted by random assignment blocks and select baseline characteristics.
Figure 3

Program Effects on Credits Attempted at Senior Colleges

SOURCE: MDRC calculations using data from the CUNY Institutional Research Database (IRDB).

NOTES: Estimates are adjusted by random assignment blocks and select baseline characteristics.
Figure 4
Program Effects on Associate's and Bachelor's Degree Receipt

Students in Study Sample Who Earned a Degree

![Graph showing program effects on degree receipt.](image)

**SOURCES:** MDRC calculations using data from the CUNY Institutional Research Database (IRDB) and National Student Clearinghouse (NSC).

**NOTE:** Estimates are adjusted by random assignment blocks and select baseline characteristics.
Figure 5

Program Effects on Average Financial Aid Award at Community Colleges

SOURCE: MDRC calculations using data from the CUNY Institutional Research Database (IRDB).

NOTE: Estimates are adjusted by random assignment blocks and select baseline characteristics.
Figure 6

Net Cost of Education per Student at Community Colleges

SOURCES: MDRC calculations using data from the CUNY Institutional Research Database (IRDB) and ASAP expenditure data, the National Student Clearinghouse (NSC), and financial and enrollment data from the Integrated Postsecondary Education Data System (IPEDS).

NOTES: Estimates are adjusted by random assignment blocks and select baseline characteristics. Tests of statistical significance were not performed. Program costs are based on a steady state of operation that excludes external research and start-up costs. Credits attempted include all college-level and developmental credits attempted. Education cost refers to the cost of credits attempted. Program cost refers to the cost of primary program components. All costs are shown in constant 2019 dollars.
Program Effects on Average Cost Per Student at Community Colleges

SOURCE: MDRC calculations using data from the CUNY Institutional Research Database (IRDB) and ASAP expenditure data, the National Student Clearinghouse (NSC), and financial and enrollment data from the Integrated Postsecondary Education Data System (IPEDS).

NOTE: Estimates are adjusted by random assignment blocks and select baseline characteristics. Total costs include the sum of the costs for operating the program and additional costs to the college for educating students.
SOURCE: MDRC calculations using data from the CUNY Institutional Research Database (IRDB), the National Student Clearinghouse (NSC), and financial and enrollment data from the Integrated Postsecondary Education Data System (IPEDS).

NOTE: Estimates are adjusted by random assignment blocks and select baseline characteristics. Total costs include education cost in senior colleges and do not include any program cost.
Earlier MDRC Publications on CUNY’s Accelerated Study in Associate Programs (ASAP)

*The Power of Fully Supporting Community College Students: The Effects of the City University of New York’s Accelerated Study in Associate Programs After Six Years*
2017. Web Feature.

*How Does the ASAP Model Align with Guided Pathways Implementation in Community Colleges?*

*Accelerated Study in Associate Programs (ASAP): A Program That Almost Doubles Three-Year Graduation Rates*
2015. Infographic.

*Frequently Asked Questions About CUNY’s Accelerated Study in Associate Programs (ASAP)*

*Doubling Graduation Rates: Three-Year Effects of CUNY’s Accelerated Study in Associate Programs (ASAP) for Developmental Education Students*
2015. Susan Scrivener, Michael J. Weiss, Alyssa Ratledge, Timothy Rudd, Colleen Sommo, and Hannah Fresques

*More Graduates: Two-Year Results from an Evaluation of Accelerated Study in Associate Programs (ASAP) for Developmental Education Students*
2013. Susan Scrivener and Michael J. Weiss

*What Can a Multifaceted Program Do for Community College Students? Early Results from an Evaluation of Accelerated Study in Associate Programs (ASAP) for Developmental Education Students*
2012. Susan Scrivener, Michael J. Weiss, and Colleen Sommo

NOTE: A complete publications list is available from MDRC and on its website (www.mdrc.org), from which copies of reports can also be downloaded.
About MDRC

MDRC is a nonprofit, nonpartisan social and education policy research organization dedicated to learning what works to improve the well-being of low-income people. Through its research and the active communication of its findings, MDRC seeks to enhance the effectiveness of social and education policies and programs.

Founded in 1974 and located in New York; Oakland, California; Washington, DC; and Los Angeles, MDRC is best known for mounting rigorous, large-scale, real-world tests of new and existing policies and programs. Its projects are a mix of demonstrations (field tests of promising new program approaches) and evaluations of ongoing government and community initiatives. MDRC’s staff members bring an unusual combination of research and organizational experience to their work, providing expertise on the latest in qualitative and quantitative methods and on program design, development, implementation, and management. MDRC seeks to learn not just whether a program is effective but also how and why the program’s effects occur. In addition, it tries to place each project’s findings in the broader context of related research — in order to build knowledge about what works across the social and education policy fields. MDRC’s findings, lessons, and best practices are shared with a broad audience in the policy and practitioner community as well as with the general public and the media.

Over the years, MDRC has brought its unique approach to an ever-growing range of policy areas and target populations. Once known primarily for evaluations of state welfare-to-work programs, today MDRC is also studying public school reforms, employment programs for ex-prisoners, and programs to help low-income students succeed in college. MDRC’s projects are organized into five areas:

- Promoting Family Well-Being and Children’s Development
- Improving Public Education
- Raising Academic Achievement and Persistence in College
- Supporting Low-Wage Workers and Communities
- Overcoming Barriers to Employment

Working in almost every state, all of the nation’s largest cities, and Canada and the United Kingdom, MDRC conducts its projects in partnership with national, state, and local governments, public school systems, community organizations, and numerous private philanthropies.