

The Role of Scholarships in Student Retention and Success

Fall 2017



Office of Institutional Effectiveness
and Analytics

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Executive Summary

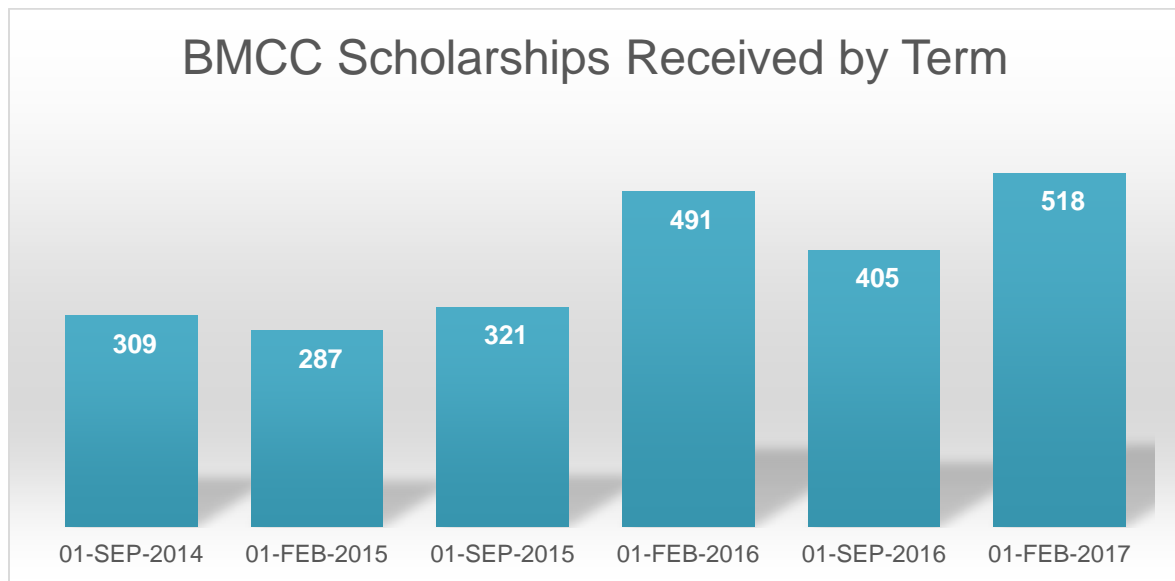
In spring 2017, the 518 students receiving BMCC scholarships represented just over 3% of the students receiving financial aid grants. This was the largest number of students served since fall 2014, when 309 students received BMCC foundation grants. BMCC scholarship students received an average of between \$1,500 and \$1,600 for spring 2017. This study examined the impact of those scholarships on graduation and retention rates by comparing students who received them with students who qualified and applied for scholarships but did not receive them. Several key findings emerged:

- Three-quarters of qualified applicants did not receive scholarships, primarily due to lack of funds.
- Rates of applying and receiving scholarships are the highest among Nonresident Aliens students and lowest among Hispanic students.
- Scholarship awards increased observed graduation rates by 20 percentage points; students who received scholarship had almost three times (odds ratio of 2.75) higher predicted graduation rates than students whose applications were rejected.
- Retention rates in one to three-year periods were consistently 15 percentage points higher for students who received scholarships over the ones who did not.

It can be concluded with high degree of confidence that the students who did not receive the scholarships would have benefitted in a similar way in terms of their retention and graduation prospects. It is also suggested that improved outreach may benefit socio-economically disadvantaged groups of students in terms of scholarship access and that an increased overall amount of scholarships would have strong positive impacts on college retention and graduation.

Context and Funding Need

In spring 2017, the 518 students receiving BMCC scholarships represented just over 3% of the students receiving financial aid grants.¹ This was the largest number of students served since fall 2014, when 309 students received BMCC foundation grants. BMCC scholarship students received an average of between \$1,500 and \$1,600 for spring 2017.



In that same term, however, 643 BMCC students relied only on loans. These students took on an average debt of between \$3,200 and \$3,300 that semester. In addition, about 1,200 students in spring 17 relied on loans and grants to make up their aid package, compiling an average loan debt between \$3,300 and \$3,500.

Federal Aid grants (mostly Pell) served over 15,800 students in spring 2017, with an average grant of just over \$2,400. State and local aid was provided to 9,268 students, with an average grant of around \$1,850.

¹ Source: CUNY Central, IRA–History Term Enrollment as of November 6, 2017.

Grants, Loans & BMCC Scholarship Counts by Fall and Spring Terms

	Total Grants Dispersed	Total Loans Dispersed	BMCC Scholarships Dispersed	BMCC Scholarships as % of Total Grants
01-SEP-2014	18,511	2,005	309	1.7%
01-FEB-2015	18,077	1,912	287	1.6%
01-SEP-2015	18,537	2,076	321	1.7%
01-FEB-2016	17,728	2,153	491	2.8%
01-SEP-2016	17,727	1,762	405	2.3%
01-FEB-2017	16,951	1,840	518	3.1%

BMCC estimates the cost of one year of full-time enrollment (not simply tuition and fees) at BMCC to be \$14,897 for the 2017-18 Academic year for students who live at home with their parents. For students living away from parents, the estimated cost is \$25,647.² A student receiving the average level of Federal, State, and Local grants would receive about \$8,500 for the academic year, which is \$1,100 below the cost for two semesters of full-time tuition. This would leave the students with no funds for fees, books, transportation, or food. Transportation alone is estimated to be \$1,054 for the year.

While the BMCC Foundation Scholarships provide significant support to students, they don't cover the cost of attending BMCC full-time. In the three years included in this analysis, only two students received more than \$4,000 in a given term, and only 17 received more than \$3,000. At least half of BMCC students who received a foundation scholarship in any term also received federal grant assistance.

	BMCC Scholarships Received	With Added Federal Aid	% of Students with BMCC Scholarships who also Received Federal Grant Aid
01-SEP-2014	309	171	55.3%
01-FEB-2015	287	143	49.8%
01-SEP-2015	321	184	57.3%
01-FEB-2016	491	275	56.0%
01-SEP-2016	405	219	54.1%
01-FEB-2017	518	294	56.8%

² <http://www.bmcc.cuny.edu/finaid/page.jsp?pid=1266&n=College%20Expenses>

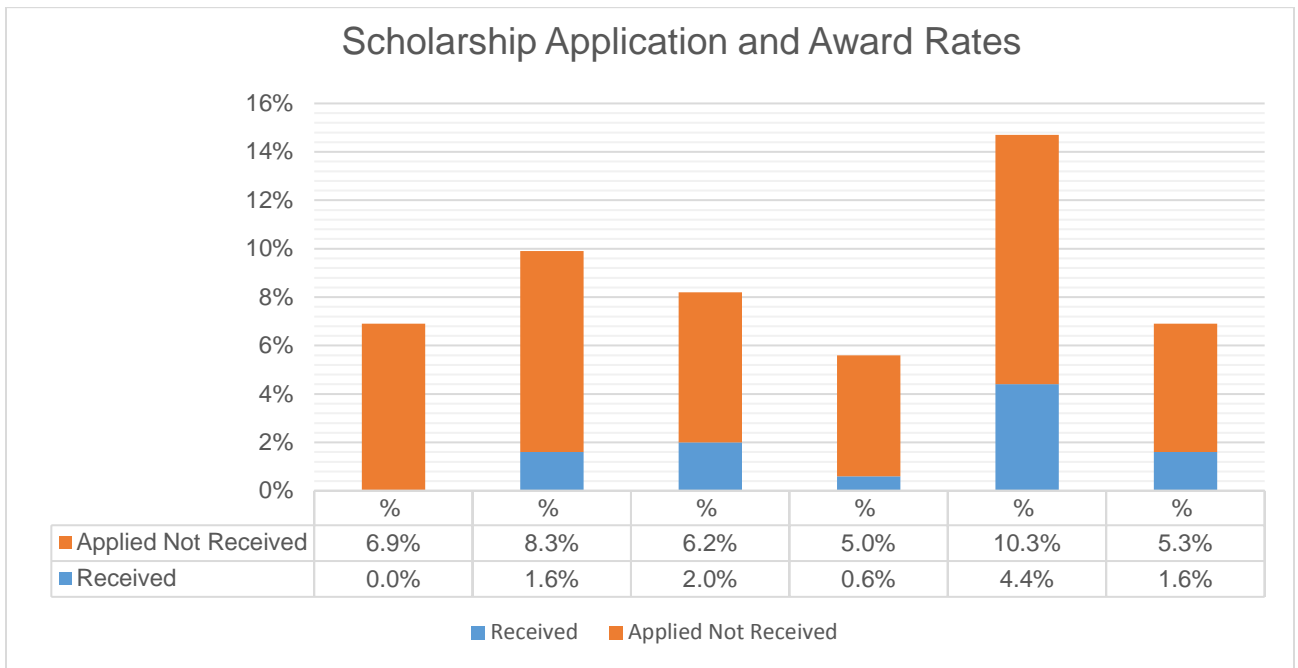
Examining BMCC Scholarship Impact

A previous report examined the impact of scholarship awards on student success and found that receiving a scholarship had a significant, positive impact on the odds of graduation as compared to the graduation prospects of students who were academically eligible but who did not receive a scholarship. This report compares BMCC scholarship recipients with students who *applied but did not receive the scholarship*. In this way the impact of scholarship can be isolated from the motivational factors, such as the resourcefulness and perseverance to comply with an arduous application process, and the true effect of funds received can be examined with respects to student retention and graduation.

BMCC invites students to apply for a full-time scholarship based on the following criteria:

- Students must have completed at least 12 BMCC non-remedial credits and have a minimum cumulative Grade Point Average (GPA) of 3.0.
- Students must be pursuing their first degree. Those who hold an associates, bachelors, masters, or doctorate degrees are ineligible.
- Students must be US citizens, permanent residents, or international students with a valid F-1 visa.
- Students in special programs such as ASAP and Out-In-Two are ineligible to apply.
- In addition to satisfying the criteria, students must submit two letters of recommendation and demonstrate financial need based on filing the FAFSA in order to be considered for the following semester. Once they have been awarded the scholarship, they continue to receive it until graduation, as long as they maintain the required GPA.

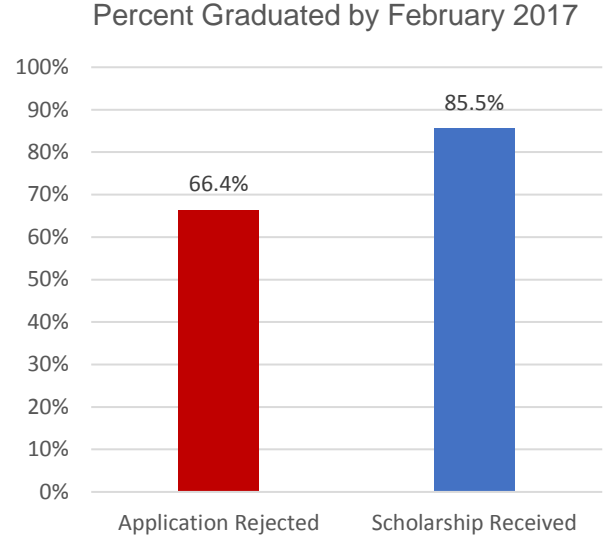
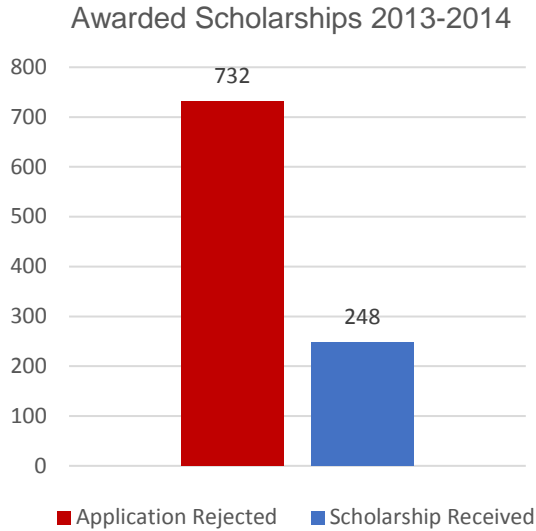
This study considers students who applied for a scholarship *for the first time* during two years, from spring 2013 until fall 2014, and examines their retention and graduation rates by February 1st, 2017. During that period, a total of 17,026 students met the eligibility criteria, of which only 290 (1.7%) were awarded scholarships. A total of 1,103 students, 6.5% of all those eligible, had their applications rejected due to funds for first-time scholarships being exhausted for the semester.



In total, BMCC was able to award only one scholarship for every four first-time applications (26% acceptance rate), which, in addition to a demanding application process, perhaps explains the relatively low proportion of eligible students applying. The group with the highest application rate (10.3%) and award rate (4.4%) are Nonresident Alien students, who are ineligible for most other funding, including federal Pell grants. A concern, however, is that the lowest application (5%) and the award rate (0.6%) belong to the College’s Hispanic students, a traditionally socio-economically disadvantaged group.

Impact on Graduation

A comparison was made between the graduation rates of four cohorts of students who received scholarships and those whose applications were rejected (fall 2014 to spring 2016). A large difference was found for these two groups with a graduation rate of 88.5% for students who received scholarships and 66.4 % for those whose applications were rejected. This twenty-point difference in observed graduation rates was highly statistically significant (Chi-square=40.38, $p < .001$).



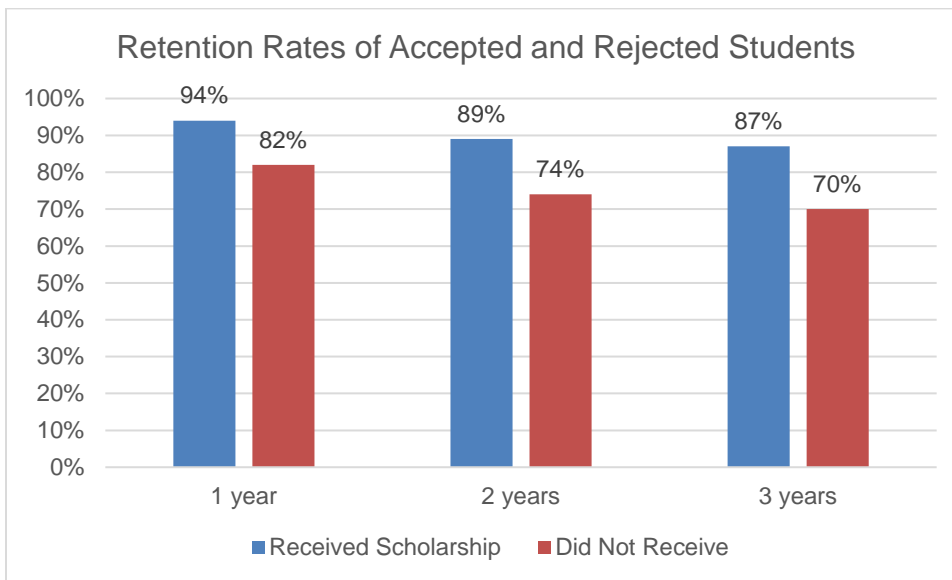
While these two groups were comparable in size and in prior college achievement, they differed somewhat in the number of credits earned and cumulative GPA at the beginning of the semester in which they applied. Students awarded scholarships as a group earned an overall GPA 0.2 points higher and had earned 1.76 more credits by that point. These are small but statistically significant differences, as well as not surprising, because grades were one of the main criteria for the scholarship awards. In order to control for these differences, and their potential influence on different graduation rates of these two groups, we used a multiple logistic regression analysis of scholarships' impact on graduation.

In this regression analysis the application-time GPA and credits earned, in addition to scholarship received, were used as predictors of graduation. The results show that students who received a scholarship had almost three times (2.75 odds ratio) greater odds to graduate than those who applied but did not receive a scholarship, while holding constant their initial status in terms of credits earned and GPA at the time of application. It is important to note that of those control variables, only the initial number of credits was shown to be a significant predictor of graduation, while the initial grades were not. These results are not unexpected, considering that the groups were already selected based on high GPA, and that number of credits earned before scholarship clearly shortens the path to graduation.

It must be pointed that this large scholarship effect – both in observed and predicted graduation rates – does not reflect just the semester when the scholarship was awarded, but also the consequent semesters until graduation. This finding reemphasizes the important, consistent contribution of the scholarship to the educational path of these students. The awarding of scholarships is resulting in higher graduation rates for equally qualified students.

Impact on Retention

In order to evaluate the short-term impact of receiving a scholarship, the retention rates of students who did and did not receive a first-time scholarship at several time points after the semester in which they applied were examined. While the retention rates for these groups of high-performing and motivated students are generally high, there were noticeable, considerable differences. Students who received a scholarship were still enrolled in higher numbers after one year (94%), two years (89%), and three years (87%), while the retention rates for those who didn't receive scholarships were 82%, 74%, and 70% respectively. These differences are highly significant according to Chi-square tests, indicating a systematic effect of scholarship on retention rates of around 15 percentage points. The awarding of scholarships is resulting in higher retention rates for equally qualified students.



In conclusion, the impact of receiving vs. not-receiving the institutional scholarship is pronounced and systematic, both with respect to retention and graduation of BMCC students. As two groups of students considered in this study were very similar, the principal difference being that the scholarship funds were available only for some, it can be concluded with a high degree of confidence that the students who did not receive the scholarship – three-quarters of first-time applicants – would have benefitted in a similar way in terms of their retention and graduation prospects.