

Evaluation of the College Bound Program: Early Findings

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Summary

Despite public investments aimed at improving educational opportunities for low-income students, not all income groups complete the same amount of schooling. Low-income students are less likely than more affluent students to pursue college degrees (Harvey & Anderson, 2005; Perna & Titus, 2005; Summers & Hrabowski III, 2006). Currently, 52 percent of students from low-income families enroll in a postsecondary institution in the fall immediately after high school graduation compared to 82 percent of students from high-income families (NCES, 2012). There are numerous benefits of a college education compared to a high school diploma, including higher earnings (Carnevale et al., 2011), greater civic engagement (U.S. Census Bureau, 2006), better health (MacInnis, 2006), and more satisfaction with life (Fischer & Hout, 2006).

College Bound Program Helps Students Go To College

Recognizing that a college education confers many advantages, the College Bound (CB) program provides a variety of free services to low-income, Hispanic, and African American students with the goal of increasing their interest in and readiness for college. The program began in 2006 and serves approximately 1,100 students and their parents in four partner high schools in and around St. Louis, Missouri. St. Louis was chosen, in part, because schools in this area serve a high proportion of low-income students who traditionally do not go on to college. The program starts with “Get Your Prep On” for students in the ninth grade. At the end of the year, they can apply to receive more intensive services in their sophomore year and through their college years. Those services are organized around three program components:

- **Making the Grade** is a comprehensive academic enrichment program that provides weekly tutoring sessions and summer workshops to mitigate summer learning loss.
- **Culture, Character, and Capacity** offers activities that are intended to promote character building, leadership, and citizenship.
- **Admission Accomplished** focuses on helping students with the college application process.

The program also includes:

- **Complete U**, which enrolls students in the second semester of their senior year in high school and helps them transition to and complete college.
- **Families as Partners**, which helps to build the capacity of families to support CB participants as they plan, prepare, pay for, and persist in college.

Is the Program Working? How Can It Be Improved?

At the request of the CB program, RAND conducted an evaluation of the program to determine if it is meeting its goals and to discover ways that it can be improved. Specifically, we addressed the following research questions:

1. Does the program have an effect on participating students' academic achievement, school attendance, behavior, and college enrollment and persistence?
2. Does the CB program operate and provide services that are consistent with best practices that have been identified in other successful programs? In what ways can the CB program be improved?

Our study used both quantitative and qualitative methods. We focused on the CB students who were selected to receive intensive services from their sophomore year in high school and beyond. We then obtained data from three school districts to find a group of comparison students who were similar in test performance and demographics to the CB students, but who did not participate in the program. Applying propensity weighting and generalized weighted regression methods to the data from this comparison group, we predicted the CB students' counterfactual outcomes, or the likely outcomes for the CB students if they had not enrolled in the program. While this analytic approach allows us to estimate program impact, it cannot account for unobserved student characteristics, such as differences relating to motivation, that could conceivably influence enrollment into a program. Additional studies, such as through the use of a randomized design, are needed in order to draw causal inferences.

We examined a number of outcomes, including scores on the states' End of Course exams in English and biology, scores on standardized college readiness measures (i.e., the ACT and PLAN tests), course grades in core subjects, number of Advanced Placement (AP) or honors courses taken, disciplinary problems, school attendance, enrollment in college, attendance at two-year versus four-year colleges, rates of full-time versus part-time enrollment in college, and college persistence, which was defined as re-enrollment into a college for at least one additional term after first starting.

We also conducted focus groups with 26 CB high school and college students and interviewed 29 CB staff to hear first-hand their ideas for improving the program and to gauge the program's alignment with recommended best practices. To identify best practices, we relied on two sources: (1) an Institute of Education Science's practice guide that recommends strategies that high schools can engage in to help increase students' access to higher education (Tierney, Bailey, Constantine, Finkelstein, & Hurd, 2009); and (2) Bodilly's and Beckett's (2005) review of the factors in out-of-school-time programs that help to deliver services to students effectively.

CB Students Improved Their Grades and Test Scores

CB program participants showed improvements in several areas over what would have been expected if they had not participated in the program. They were more likely to meet proficiency

targets on the End of Course exams in English and biology (see Figure A), to obtain at least a B grade in a number of high school courses considered foundational for college (see Figure B), to take more AP or honors courses, to demonstrate fewer disciplinary problems, to attend school more frequently, and to score higher on the PLAN. The course grade results based on the CB and non-CB participants should be interpreted cautiously because we could not standardize the grades to account for variation in stringency of teachers' grading practices.

Figure A

Percentages of CB Participants who Obtained Proficiency on the End of Course Tests in Comparison to their Estimated Counterfactual (CF) Percentages

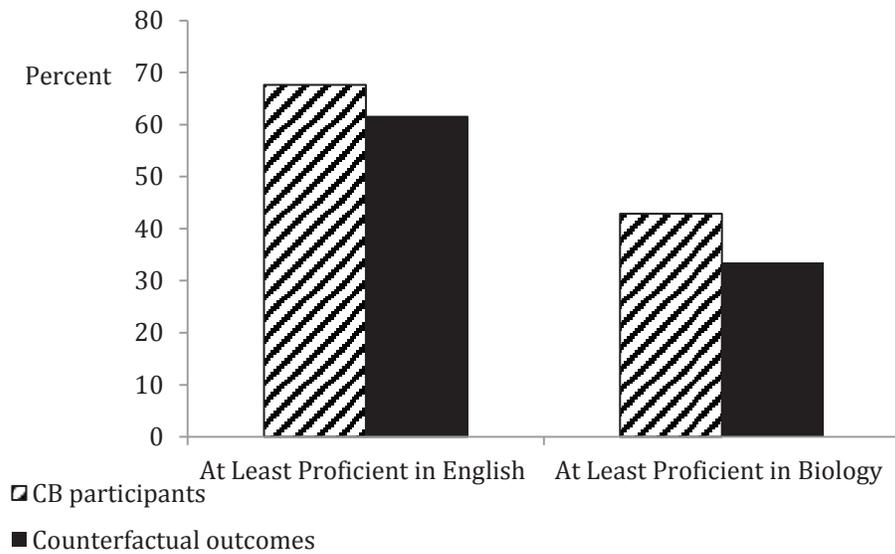
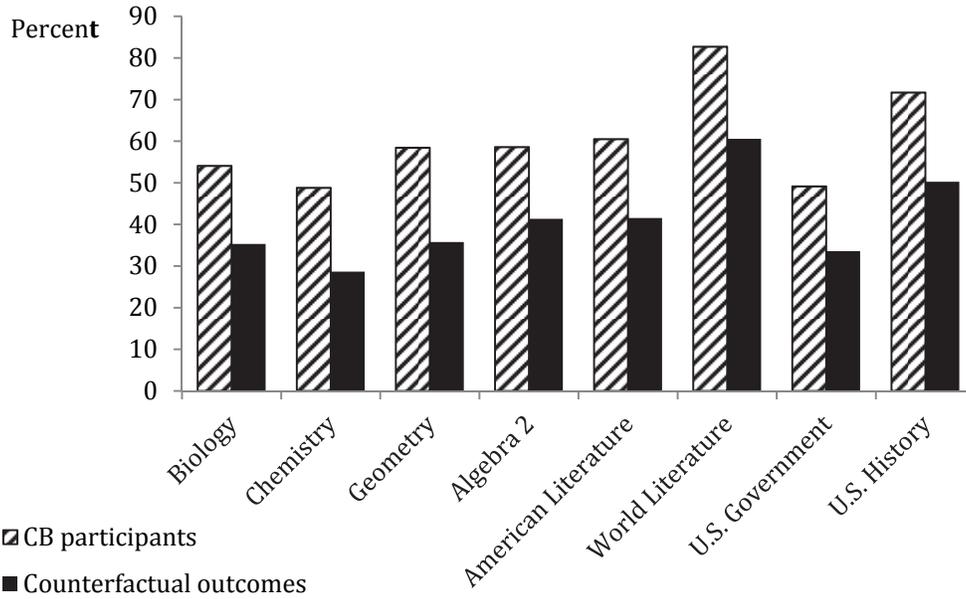


Figure B

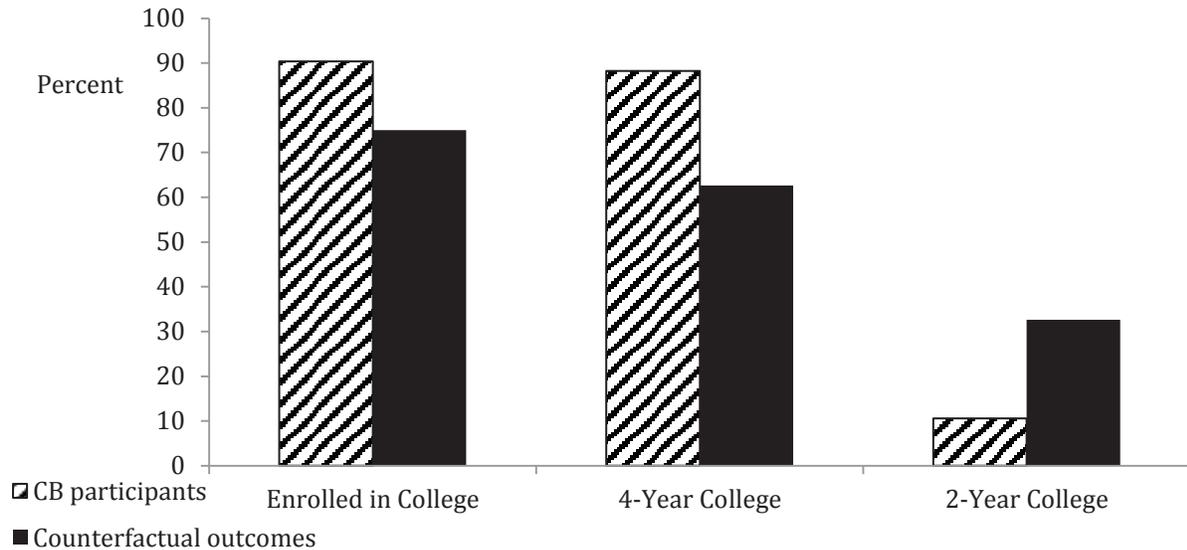
Percentages of CB Participants who Obtained at Least a B Grade or Better in Comparison to their Estimated Counterfactual (CF) Percentages



In addition, CB students were more likely to attend college than would have been predicted had they not participated in the program. Furthermore, when CB students attended college, they were more likely to attend a four-year college than a two-year college (see Figure C). Also, 61 percent of CB students enrolled in college full time rather than part time, and 93 percent of students re-enrolled after their first term. The full time and persistence percentages are high, but at the time the study ended, there were no observable differences between CB participants and what might have been expected if the students had not participated in the CB program. The lack of statistical significance may have stemmed from the smaller sample sizes for these two outcomes, which may not have afforded sufficient statistical power to detect differences.

Figure C

Percentages of CB Participants within Each Postsecondary Category in Comparison to their Estimated Counterfactual (CF) Percentages



Note. The enrollment rates for 4-year and 2-year colleges are among college attendees.

The results also point to the importance of program exposure or dosage. When we limited the analysis to higher-participating CB students, the results were similar to those reported above, such that the significant relationships observed in the CB population were replicated for the sample of higher-participating students. In addition, we observed two additional significant relationships that were not previously observed for the overall CB population. Namely, with respect to ACT scores and timely completion of the required college-preparatory courses in social studies, program effects were stronger for students who participated in CB more often. This is consistent with previous research that found the extent to which participation influences students' outcomes depends upon the depth and breadth of participation in the program (Vandell, Reisner, & Pierce, 2007; Zief, Lauver, & Maynard, 2006).

The CB Program Compares Favorably with Recommended Best Practices

In many ways, the CB program implements many practices that are believed to lead to successful student outcomes. It has a clear mission and supportive emotional climate. It ensures that students know what courses they need to take for college admission, provides students with peer and adult mentors to support their college aspirations, assists them with their college applications, and counsels them about obtaining financial aid. It also retains well-credential coaches, all of whom hold at least a bachelor's degree, have a college-level grade-point average above 3.0, and have demonstrated leadership in a service position.

Looking Ahead

RAND's evaluation identified three opportunities for the CB program to improve. In addition to fostering relationships between CB students and the coaches, who have a one-to-three year tenure with the program, the CB program may want to take steps to increase the interactions between CB participants and more permanent CB staff. This will help to ease transitions when coaches end their tenure with the program. Furthermore, the CB program should examine not only students' course grades, but also their scores on standardized state and district tests to assess their college readiness. Finally, the program should offer incentives to encourage students to participate in the voluntary program components, which may lead to even stronger benefits.

Although the study results indicate that the CB program is on-track to meet its ultimate goal of improving the college graduation rates of participants, we did not have the requisite data to examine whether the program is actually improving the college performance of CB students. Future studies that examine important college-level outcomes such as selectivity of the college entered, number of remedial courses taken at college, college major, college GPA, and college graduation rates would provide further information about the CB program's impact on its participants.

It is also important to recognize that because the program did not employ a randomized design to select participants, it remains possible that the results are partially attributable to the pre-existing differences that we observed between the CB participants and the comparison group, and which we could not fully disentangle from program effects. Although we used advanced statistical techniques to adjust for these pre-existing differences, such methods cannot fully account for other unobserved differences. In the future, as the CB program continues to attract attention and receive more applications from qualified applicants than it can feasibly support, it may be possible to select students from a random lottery system. This will help facilitate an experimental design that allows for better estimates of program effectiveness.