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EVALUATION REPORT

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College Bound Scholarship Program

FINAL REPORT

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Table of Contents

EXECUTIVE SUMMARY

The purpose of this report is to provide information to the Bill & Melinda Gates Foundation and College Spark Washington about the impact of the College Bound Scholarship (CBS) for the 2012 graduates, the first cohort to use the CBS. Specifically, these foundations want to know why, "some CBS students are more successful than others when it comes to college readiness, enrollment, and persistence." The goal of this research project is to provide a comprehensive evaluation to identify trends, variables, and specific data points among CBS students that correlate with college success. The results from this project can be used to support future strategic planning and targeted development of the College Bound Scholarship program in Washington State and to support improved programmatic practices in K-12 systems (counselors), colleges (advisors/student services), and Community Based Organization partners to both schools and colleges.

The College Bound Scholarship program was designed to support recommendations from Governor Chris Gregoire's Washington Learns 18-month comprehensive review of the state's education system. The intent was to make college more affordable and accessible, raise educational attainment, and create a college-going culture in Washington. The College Bound Scholarship promises college tuition at public institution rates and up to $500 a year for books to low-income, middle-school students who work hard in school, stay out of legal trouble, and successfully apply to a higher education institution. The amount of the Scholarship award is combined with a State Need Grant and other state funding and is implemented through the college or university as part of a financial aid award. Because of these requirements, all students are required to apply for financial aid by completing the Free Application for Federal Student Aid during their senior year of high school.

From 2007 to 2013, more than 151,600 students have signed up for CBS in Washington State during the 7th and 8th grade years (WSAC, 2013). For the first four cohorts, approximately 64% of eligible students applied. Since then, the percentage has increased. For example, for the first cohort (2012 graduates) 57% of eligible students signed up, but for the fifth cohort (2016 graduates), 80% of eligible students signed up for the scholarship. This growth has been credited to the increasing number of 7th grade students signing up across the state, which has been attributed to targeted outreach, school and district support, and strong partnerships between the K-12 system and various community-based and college-access partners and non-profit organizations. The largest percentages of students signing up were White (42%) or Hispanic or Latino (33%). Eight percent of students signing up for the CBS were Black, 8% Asian, 6% multiracial, 2% American Indian, and 1% Native Hawaiian/Pacific Islander.

While WSAC administers the CBS, the College Success Foundation (CSF) is the entity responsible for outreach across the state. There are nine CBS Regional Officers employed by CSF to work in the middle schools, high schools, and colleges in each educational service district. Their main efforts have focused on identifying "champions" at each institution who assist in creating a culture of college awareness. CSF representatives noted that they have had success in working with middle schools but are struggling to make the same connections at the high school level and have just begun the process of identifying champions at post-secondary institutions.

Findings indicate that while some students report receiving some college preparatory support in secondary school, responses varied and most respondents believe these interventions and supports are not available often enough. AVID and GEAR UP were the most commonly mentioned college prep programs, and are largely perceived as beneficial. A significant percentage of students (around 29%) responded that they did not have access to such programs in their high schools. Students in the first cohort of college attendees noted that college level supports for CB scholars are developing and not yet consistent across institutions. These findings align with the CSF and college personnel perspectives. College staff members and CSF personnel identified several specific goals for supports, including identifying institutional champions, conducting outreach to CB scholars, and alignment of data sharing systems across high schools and colleges to enable accurate tracking of CB scholars.

In addition, researchers followed up with 10 high schools, including five high schools that have a large proportion of College Bound Scholars using the scholarship and attending college compared to five high schools that did not to determine if some promising practices occur. The schools with high rates of scholarship usage and college attendance generally were more intentional in the support for College Bound Scholars and had a greater focus on college preparation. Examples of college preparation included having ongoing discussions with both high school and middle school staff about the CBS, providing students with one on one support, tracking students with less than a 2.0 GPA, and working with students at each grade level to prepare students for college. In addition, these schools had an expansive list of programs available to students to increase college awareness and preparation. College Bound Scholars who found value in the various college preparation programs stated these resources helped them by providing assistance in searching and filling out scholarships, college applications, and FAFSA; by visiting college campuses; by taking advanced courses sometimes with college credit; by developing study skills; by providing mentoring, and by having discussions about the college environment. High schools with high rates of college attendance for the College Bound Scholars also have staff members and students who more clearly understand the specifications of College Bound. Staff members clearly believed that they could describe the aspects of the scholarship or that they had someone on staff who could provide information. This is a critical piece because when there is a clear understanding of the scholarship process then students can better understand their requirements and the scholarship is kept out in front of the students. Generally, schools that have had success in signing up students and having students access and use their scholarship after high school have identified students who signed up for the scholarship and have aligned college information and support programs to meet students' needs.

To investigate the impact on students who receive CB scholarships, we administered an online survey to 1,107 students who signed up for the scholarship. Researchers conducted structured interviews with students who agreed to be contacted following the online survey. Additional student focus groups were conducted at a sample of schools with high and low rates of college enrollment for College Bound Scholars. Overall, students believe CBS incentivizes them to maintain high grades and to enroll in college. Student respondents appreciated the flexibility of enrollment allowed by the scholarship. Many students said that the CBS has a positive influence on students who might not otherwise be able to afford college.

In the online survey, College Bound Scholars (full-and partial-year college attendees) mostly agreed the CBS was critical to them attending college. In fact, 85% of full-year college attendees reported the scholarship was critical to attending college. In addition, just over 50% agreed they could not continue to attend college without the CBS. This suggests that the financial support and participation in the scholarship was critical. However, interviewees disagree about whether being a College Bound Scholar has provided them with a network of friends or relationships with other CBS recipients or additional academic support at the college level.

During interviews and focus groups, stakeholders identified contextual issues, which they believe hinder the extent to which they can reach all students and improve outcomes. Personnel agreed that the largest barriers concern school personnel. First, staff members said that school leadership should do more to support the CBS program. Second, staff members said they have limited resources and must juggle the needs of College Bound program with those of other competing initiatives. In addition, some respondents reported that their schools have a culture of resistance in which some staff members actively dismiss the notion that low-income students would attend college. Furthermore, parents and guardians were sometimes skeptical of the CBS because they believe the scholarship to be "too good to be true" and, consequently, do not respond actively to outreach efforts. Some school personnel at the middle school level struggle to determine who is eligible for the scholarship, and when students transition to the high school, staff members are often unaware of who signed up for the scholarship. Student respondents reported that they were not fully prepared for the academic rigors of college and that they would have benefitted from more college preparedness and awareness programs. Finally, students acknowledged the difficulty of the transition from high school to college (less personal environment, college campus, different structure to daily living).

The section below summarizes the findings for each of the evaluation questions.

Evaluation Question #1: What variables predict CBS students who graduate high school but do not enroll in college?

The most common reasons cited were financial costs or other reasons, such as taking a year off from formal schooling, family or medical reasons, and the need to save money for work. Our statistical analyses examined both school and student level predictors of college enrollment. We did not find statistically significant relationships between school-level demographics or teacher characteristics with CBS student enrollment. However, we found a relationship between school's participation in Navigation 101 and students' enrollment in college. CBS students who attended schools with Navigation 101 programs were more likely to enter college directly after high school. The odds of enrolling in college were 1.38 times higher for CBS students who attended with schools with Navigation 101 programs.

Several student-level variables predicted college enrollment, including ethnicity and college preparation. Black (2.53) students' odds of enrolling in college were greater than White students' odds, controlling for other school and student level factors. Participation in Running Start programs also doubled the odds of college enrollment. Completing the science requirement

increased students' odds of enrolling in college by a factor of 1.44. Similarly, students' math level was associated with their odds of enrolling in college. Each additional level of math increased students' odds of enrolling in college by a factor of 1.17. GPA was the strongest predictor of student enrollment in college. Higher student GPA was associated with higher odds of college enrollment after graduation.

Evaluation Question #2: What variables predict CBS students who enroll in college but do not complete their first year?

We used National Student Clearinghouse data to examine the college enrollment status of CBS students. The vast majority of CBS students (73%) enrolled in college full time during the 2012-2013 school year. This rate of full time enrollment was similar to the level for the non-FRL students (78%) and higher than the level of FRL students (60%).

We used two statistical models to examine relationships between school and student level predictors and the outcome, full year college enrollment. The first model used the full sample of students and the other model examined the relationships only among CBS students. Our first analysis showed that, controlling for school and student level variables, CBS students had higher odds of persisting in college than either FRL or Non-FRL students. More specifically, CBS students' odds of enrolling in college full-time were more than two times (2.22) greater than the odds for FRL students. CBS students' odds of enrolling in college were 1.24 times the odds for Non-FRL students

The school and student predictors of full year college enrollment were similar in both models. Students who attended high schools with Navigation 101 programs were more likely to complete their first year of college. Both models also showed that Black and Asian American students' odds of enrolling in college full-time were greater than White students' odds. Both models also showed that various measures of high school preparedness were also significant predictors of full year college enrollment. Completion of Washington state requirements in science, foreign language, and math was associated with increased odds of full year college enrollment. Similarly, participation in AP and IB courses or Running Start increased the odds of first year completion. GPA was also a positive predictor in both models.

Evaluation Question #3: What variables predict CBS students who enroll and persist in college through their first year?

The next set of analysis also included NCS data on student persistence. We categorized students as persistent if they attended college some time during the 2012-2013 school year and returned to college in the fall of the 2013-2014 school year. We found that 77% of CBS students persisted from their first year to second year of college. This rate of persistence was slightly lower than the level for the non-FRL students (83%) and higher than the level for FRL students (68%).

We used statistical models to assess the relationships between our school-and student-level predictors and student persistence. The first model used the full sample of students and the other model examined the relationships only among CBS students. The first analysis showed that,

controlling for all other variables in the model, CBS students had higher odds of persisting in college than either FRL or Non-FRL students. More specifically, CBS students' odds of persisting in college were more than two times (2.32) greater than the odds for FRL students. CBS students' odds of persisting in college were 1.26 times the odds for Non-FRL students.

Our results for the student and school level predictors were similar to the full year enrollment model. Students who attended high schools with Navigation 101 programs were more likely to persist into the second year of college. The models also showed that Black and Asian American students' odds of persisting in college were greater than White students' odds. Both models also showed that various measures of high school preparedness were also significant predictors of persistence. Completion of Washington state requirements in social studies, science, and foreign language was associated with increased odds of college persistence. Similarly, participation in AP and IB courses increased the odds of full time enrollment. GPA was also a positive predictor in both models.

Evaluation Question #4: Which college readiness indicators when combined with the CBS were most predictive of college enrollment/persistence?

Students who received free-and reduced lunch were less likely to meet college admission standards than CBS and non-FRL students. Controlling for school and student variables, CBS students had higher odds of completing college admission requirements than their non-CBS FRL classmates. In most cases, CBS students' odds were similar to those of their non-FRL peers. CBS students' odds of completing the math standard were 24% greater than the odds for non-FRL students. They also had 15% greater odds of completing all of the Washington state standards for college admission.

The next model explored the relationship between college readiness indicators and college enrollment. The model showed that, controlling for all other variables, College Bound scholars had higher odds of enrolling in college than FRL and non-FRL students. College Bound scholars' odds of enrolling in college were 2.19 times greater than the odds for FRL students and 1.22 times the odds for non-FRL students. The model also showed that students who met college admissions requirements were more likely to enroll in college than students who did not meet the requirements.

As in our other models, high school preparation was a significant predictor. The odds of enrolling in college increased if students completed math, social studies, science requirements, and foreign language requirements. Finally, students with higher GPAs were also more likely to attend college.

Evaluation Question #5: To what extent has the CBS program shown an impact on college enrollment rates in Washington State?

Our analysis of Washington college enrollment rates 2011 and 2012 high school graduates showed that the overall rate of enrollment did not change significantly. However, our analysis detected a shift in student preference. Students who graduated during the 2012 school year were more likely to attend 4-year colleges than 2011 graduates. The percentage of college enrollees who attended 4-year colleges increased from 51% in 2011 to 55% in 2012 ($\chi^2 = 141.47$, $p < .001$).

Evaluation Question #6: To what extent do CBS student demographics impact outcomes?

We used a series of Ordinary Least Squares regression models to assess the relationship between school-level demographics and CBS student outcomes (graduation rate, college attendance rate, CBS rate, and composite rate). The predictor variables included measures of school size, demographics, and teacher quality. Total enrollment, percentage of non-White students, percentage of male students, and student-teacher ratio were all significant predictors of emerged as significant predictors of most of the outcomes. Total enrollment was positively associated with all four outcomes such that schools with higher enrollments were likely to have higher rates of graduation, college attendance, scholarship use, and overall success for CBS students. The percentage of students enrolled in technical and college credit programs was positively related to all four outcomes such that schools with higher percentages of students enrolled in these programs were also likely to have higher rates on each of the outcomes. On the other hand, the percentage of male and percentage of non-White students were negatively related to many of the outcomes. Schools with a higher percentage of males and those with higher percentages of non-White students generally had lower rates on all of the outcomes. The lone exception was the CBS use rate. CBS use was unrelated to the percentage of non-White students at a school.

Using data from the Navigation 101 survey of 24 College Readiness Initiative Schools, we examined the relationship between teacher and student perceptions of school climate and CBS student outcomes. Results of the analysis indicate several significant findings. We found that teachers' attitudes and beliefs about school personalization (i.e., the extent to which the school facilitates relationships between students and staff) were negatively related to the composite rate.

We found several significant correlations between students' average responses to the Student Perspectives Questionnaire and CBS students' outcomes. The *High Expectations* factor, which assessed the extent to which students believe that teachers at the school are invested in educational success for all students, was positively related to both the CBS use rate and the college attendance rate. The *Performance Assessment* factor, which probes the number of times that teachers gave assignments that allow students to show what they have learned, was positively related to the graduation rate and the composite rate. The *Satisfaction I* factor, which assesses the extent to which students are pleased with their academic preparation, was positively related to graduation rate. *Sense of Belonging,* which measures the extent to which the student feels like a member of the school community, was positively related to graduation and composite rate. Finally, *Future Focus,* which evaluates the extent to which the high school has adequately prepared the students' for college and career, was also positively related to both graduation rate and composite rate.

Examining college-bound relationships for CRI and Road map schools, no school-level variables were significant predictors of college enrollment. However, holding school and student level variables constant, Black and Asian/Pacific islander CBS students were more likely to enroll in college than Whites (43% and 54%, respectively). Asian/Pacific islander CBS students' odds of enrolling in a 4-year institution were 47% greater than the odds for White students.

Evaluation Question #7: What identified barriers and supports most impact the CBS program?

Evaluation Question #7a: For CBS eligible students, what are the reasons why some never complete the FAFSA?

We identified three main themes in why students had not completed the FAFSA: (1) A student was not a legal citizen of the United States of America and thus did not apply for federal student aid; (2) the student planned to take time off from school after graduation and thus did not participate in any college preparatory paper work (applications, financial aid, etc.); and (3) the student did not have all the necessary paperwork to complete the FAFSA on hand when they attempted to complete it.

Evaluation Question #7b: For CBS eligible students, what are the reasons why some never apply to college?

Approximately 106 survey respondents indicated that they did not apply to college following high school, and of these, only three indicated that they did not maintain College Bound Scholarship eligibility. Students specified the need to work to earn money to fund college living expenses, to take time off from formal schooling, and to clarify personal goals as reasons why they had not enrolled in college in the first year out of high school. Nearly all interview respondents in this category noted their intention to enroll in the coming year and to use their college bound scholarship to fund their education.

Evaluation Question #7c: For CBS eligible students, what are the reasons why some are accepted to college, but they don't attend college?

A small number of survey respondents indicated that they had been accepted to college and did not attend in the 2012-13 school year. In interviews, participants noted their intention to attend college in the coming school year (2013-14), but that they had faced multiple barriers to attending this year. Students reported the financial costs of attending college (living expenses, commuting, etc.) as a main barrier to not having enrolled in their first year out of high school. Job demands and family reasons followed closely as reasons for not enrolling this year.

Evaluation Question #7d: For CBS students who attend college but do not complete the first quarter, what are their reasons for not persisting?

Students reported financial constraints and family reasons (several dealt with housing transitions, illnesses, gave birth to children, etc.) as the primary catalysts behind an incomplete year of college. In our interviews and survey responses, nearly all participants noted that despite not having completed a full year initially, they intend to enroll for the 2013-14 school year.

Evaluation Question 7e: For CBS students who attend college but do not complete the first year, what are their reasons for not persisting?

Interview participants reported several reasons why they did not attend the whole year, including childcare (two students had children) and transfers from one institution to another midyear. All students in this category who agreed to be interviewed indicated that they are enrolled for college in the 2013-14 school year and intend to use their College Bound Scholarship, and nearly all students who were surveyed indicated a similar response.

Researchers analyzed the practices occurring at the high performing high schools that had higher rates of using the CBS and that appeared to be contributing to some of the improvements in students attending college. Because the program is relatively new, these practices are just emerging, and in some cases, the practices are not fully developed at the higher performing schools. The emerging promising practices include school-wide focus on college readiness, stakeholder knowledge of College Bound, and data-driven support.

College Bound Scholarship Program: Research Project

PRELIMINARY REPORT

INTRODUCTION

The purpose of this report is to provide information to the Bill & Melinda Gates Foundation and College Spark Washington about the impact of the College Bound Scholarship (CBS) for the 2012 graduates, the first cohort to use the CBS. Specifically, these foundations want to know why, "some CBS students are more successful than others when it comes to college readiness, enrollment, and persistence." The goal of this research project is to provide a comprehensive evaluation to identify trends, variables, and specific data points among CBS students that correlate with college success. The results from this project can be used to support future strategic planning and targeted development of the College Bound Scholarship program in Washington State and to support improved programmatic practices in K-12 systems (counselors), colleges (advisors/student services), and Community Based Organization partners to both schools and colleges.

Following the introductory section, we describe the evaluation design, provide background information about the College Bound Scholarship Program, discuss the evaluation findings, provide a summary, and review the implications.

EVALUATION DESIGN

The evaluation utilized a multiple-measures, mixed-methodology approach. The collection of both quantitative and qualitative data adds scope and breadth to the study and allows researchers to triangulate findings. The multiple-measures, mixed-methodology design is ideal for providing both formative and summative feedback. A description of the evaluation questions, participants, and data sources is provided below.

Evaluation Questions

Evaluation activities followed the existing framework as stated in the original proposal. Based upon the stated purposes of the evaluation, eight research questions were posed:

1) What variables predict CBS students who graduate high school but do not enroll in college?
2) What variables predict CBS students who enroll in college but do not complete their first year?
3) What variables predict CBS students who enroll and persist in college through their first year?
4) Which college readiness indicators when combined with the CBS were most predictive of college enrollment/persistence?

5) To what extent, has the CBS program shown an impact on college enrollment rates in Washington State?
6) To what extent, does CBS student demographics impact outcomes?
7) What identified barriers and supports most impact the CBS program?
    a. For CBS eligible students, what are the reasons why some never complete the FAFSA?
    b. For CBS eligible students, what are the reasons why some never apply to college?
    c. For CBS eligible students, what are the reasons why some are accepted to college, but they don't attend college?
    d. For CBS students who attend college but do not complete the first quarter, what are their reasons for not persisting?
    e. For CBS students who attend college but do not complete the first year, what are their reasons for not persisting?
8) What does literature reveal about the efficacy of early college going incentive programs?

Participants

The participants from this project include several different groups. Because the Bill & Melinda Gates Foundation and College Spark Washington had previous partnerships with schools from the Road Map Project and the College Readiness Initiative (CRI), we focused our evaluation efforts on those schools (See Table 1).

Table 1.
College Readiness Initiative and Road Map Schools

College Readiness Initiative Schools		**Road Map Schools**	
District	**School**	**District**	**Schools**
Weatherwax HS	Weatherwax HS	Auburn SD	Auburn Mountainview HS
Bremerton SD	Bremerton HS		Auburn Riverside HS
Bridgeport SD	Bridgeport HS		Auburn Senior HS
Burlington-Edison SD	Burlington-Edison HS		West Auburn HS
Curlew SD	Curlew ES/HS	Federal Way SD	Decatur HS
Cusick SD	Cusick Jr./Sr. HS		Federal Way HS
Evergreen SD	Heritage HS		Thomas Jefferson HS
Ferndale SD	Ferndale HS		Todd Beamer HS
Franklin-Pierce SD	Washington HS		Career Academy at Truman
Grandview SD	Compass HS	Highline SD	Academy of Citizenship and Excellence
	Grandview HS		Aviation HS
Inchelium SD	Inchelium HS		Arts & Academics Academy
Mary Walker SD	Mary Walker HS		Global Academy
Mount Vernon SD	Mount Vernon HS		Health Sciences and Human Services HS
Republic SD	Republic HS		Technology, Engineering, & Communications
Spokane SD	Rogers HS		Highline HS
Tacoma SD	Foss HS		Mount Rainier HS
	Lincoln HS		New Start HS
Toppenish SD	Eagle ES		Odyssey HS
	Toppenish HS	Kent SD	Kent Meridian HS

Tukwila SD	Foster HS**		Kent Mountainview HS
Wellpinit SD	Wellpinit HS		Kent Phoenix Academy
			Kentlake HS
			Kentridge HS
			Kentwood HS
		Renton SD	Hazen HS
			Lindberg HS
			Renton HS
			Sartori Education Center
		Seattle SD	Chief Sealth HS
			Cleveland HS
			Franklin HS
			Garfield HS
			Rainier Beach HS
			South Lake HS
		Tukwila SD	Foster HS**

**Foster High School in the Tukwila School District belongs to both groups.

Table 2 details the demographics of focus schools in this sample (Road Map/CRI Schools) compared to the demographics of the other schools across the state. Comparing student demographics from the 2011 – 2012 school year of these two groups reveals substantial differences. Schools in our sample have a larger mean enrollment compared to the remaining Washington State schools, have greater diversity, and have more students who qualify for transitional bilingual and special education services. Furthermore, this sample has a greater percentage of students who qualify for free/reduced lunch.

Table 2.
Demographics of Schools in Sample

	Road Map/CRI Schools (Schools in Study)	**Other High Schools Statewide**
Enrollment	Mean =776	Mean = 533
Free/Reduced Lunch	57.7%	42.8%
Race/Ethnicity		
American Indian/Alaska Native	3.9%	3.2%
Asian	11.4%	3.4%
Pacific Islander	2.1%	.5%
Black	12.8%	3.4%
Hispanic	24.9%	15.9%
White	37.3%	64.5%
Mixed/Two or More Races	6.1%	4.7%
Other/Unknown	1.5%	4.4%
Gender		
Male	52.1%	50.5%
Female	47.9%	49.5%

Programs		
Transitional Bilingual	7.3%	2.8%
Special Education	14.4%	12.1%
Teachers with a Master's Degree	62.9%	64.1%

Table 3 shows three different populations of students. The first includes the demographics of the total Washington State population of students in the 2012 Cohort who enrolled for the CBS, compared to students in this sample, compared to the demographics of students who completed the online survey. The students in this sample are more diverse, with more Asian/Pacific Islander and Black students compared to Washington State and fewer Hispanic and White Students. The students who completed the online survey include more Asian students and more females compared to the Washington State population.

Table 3.
Demographics of Students who Enrolled in CBS

	Washington State	Sample Students	Online Survey Sample
Race/Ethnicity			
American Indian/Alaska Native	1%	1.2%	1.4%
Asian/Pacific Islander	9%	24.9%	15.4%
Black	8%	18.5%	5.7%
Hispanic	32%	23.2%	25.5%
White	43%	27.5%	38.8%
Mixed/Two or More Races	5%	4.8%	2.4%
Declined/Unknown	2%		4.2%
Gender			
Male	46%	41.4%	33.6%
Female	54%	58.6%	66.4%

Data Sources

To address the research questions, researchers gathered data from multiple sources. The BERC Group, Inc. has completed the following evaluation activities, which are listed below and are described in more detail throughout the report.

Analysis of existing data. We collected a variety of data from the students' high schools. To provide detailed understanding of existing patterns a variety of college readiness indicators were collected. Student transcripts and school data reports are the primary artifacts for this analysis. We provided stipends to staff members who helped to gather the data. The data that we collected included:

- Student Transcripts: The data includes college level course taking while in high school (senior year courses, Advanced Placement/International Baccalaureate, dual credit courses), GPA, and the extent to which students earned a college eligible transcript.
- Early warning indicators including, school absence, course failure, suspension and expulsion data, and standardized test scores.
- High school graduation data
- School level programs (i.e., AVID, Navigation 101, MESA, Gear-Up, Upward Bound).
- College enrollment and persistence data
- FAFSA Completion rates

The early warning indicator data was not available for all students, and because of this, the results were not included in the main analyses. However, we completed a sub-analyses for the smaller set of students, and we included those results into Appendix A.

High School Institutional Data. We examined data from the Washington Student Achievement Council's (WSAC) database of 638 high schools. Each high school had at least one College Bound Scholar in the 2012 graduation cohort. In this dataset, 15,148 CBS students were enrolled in the high schools. The data set included the number of college bound scholars enrolled at each school, graduated from high school, enrolled in college, received the College Bound Scholarship, and received the Student Need Grant (SNG).

School College Bound Scholars Composite Scores. We ranked schools according to three criteria: the number of College Bound applicants who graduated from high school; the number of college bound applicants who attended college; and the college bound applicants who used the college bound scholarship. We next calculated three different rates: the graduation, the college attendance, and the scholarship use rates. We calculated the graduation rate by dividing the number of applicants who graduated from high school by the total number of applicants. Similarly, we calculated the college attendance rate by dividing the number of applicants who attended college by the total number of applicants; and we calculated the scholarship use rate by dividing the number of applicants who received the scholarship by the total number of applicants. During the next step of analysis, we standardized the scores on all three rates. Lastly, we calculated a composite score by taking the mean of the standardized graduation, college attendance, and scholarship rates.

Transcripts. The study also included transcript data obtained from schools. We analyzed transcripts for 9,249 high school students from the 57 high schools in the Road Map region and CRI. The analysis focused on students' course-taking patterns in English, mathematics, science, social studies, foreign language, and fine arts.

College Enrollment and Persistence Data. We analyzed college attendance and persistence data from the National Student Clearinghouse (NSC). This included information on students' enrollment in college directly after high school; their choice of 2-year vs. 4-year institution; and whether they persisted in college after their freshman year.

Climate/Attitude Surveys. Students in the College Readiness Initiative schools completed Climate Surveys, in the year that students were seniors in high school (2011-2012). We analyzed surveys to create mean scores for a number of indexes, including school (*Personalized, Future Focus,* and *Navigation 101 Beliefs*), satisfaction (*Sense of Belonging, High Expectations, Satisfaction 1,* and *Satisfaction 2*), and learning factors (*Active Inquiry, In-Depth Learning,* and *Performance Assessment*). The Road Map Schools' Navigation 101 surveys were not consistent across schools and districts. Consequently, our analysis only includes a subset of CRI schools.

Surveys. We invited 7,860 College Bound Scholarship Eligible Students who graduated in 2012 with properly formatted e-mails to complete an online survey. Students received a $5.00 stipend for completing the survey. Of those invited, 393 emails were returned as undeliverable. In total, 1,107 students completed the survey. The survey included questions about whether students completed the FAFSA, applied for college, attended college, or used their college bound scholarship. There were also specific questions about the College Bound Scholarship.

Structured focus groups/interviews. We have conducted interviews and focus groups with a number of different subgroups. We conducted a focus group with College Success Foundation, including eight regional officers who provide support to the ESDs and the Washington Student Achievement Council (WSAC). In addition, we conducted structured interview with a subset of students who completed the survey listed above. This included 68 students who attended college full time and planned to reenroll. We also conducted interviews with 48 additional students who did not enroll in college or dropped out. Students received a $10.00 stipend for participating in the interview. The focus of these interviews will be reasons for not accessing the scholarship (e.g., lack of interest, minimum criteria not met, not completing FAFSA, or other priorities). In addition, we attended a College Bound Strategy Convening, and some college representatives participated in a panel. We have included information from this convening.

Finally, we conducted focus groups and interviews with 10 high schools across the state. We chose sites with high and low composite CBS rates. Across the sites, we interviewed 49 staff members including administrators, counselors, and teachers who provide support for the CSB as well as 47 students who signed up for the CBS.

Documentation review. We conducted a thorough review of current documents available including, assessment reports, progress reports, project summaries, policies, goals, progress checks, survey data, promotional literature (assess outreach efforts), recruitment and support activities, internal evaluation efforts, and previous evaluation work.

Literature review. A review of relevant research and literature of early college going incentive programs was completed. We included an analysis of other relevant programs to understand their successful strategies and outcomes. Some of these programs include Kalamazoo, Pittsburg Promise, Indiana, and Oklahoma.

BACKGROUND OF THE COLLEGE BOUND SCHOLARSHIP PROGRAM

The College Bound Scholarship (CBS) program was designed to support recommendations from Governor Chris Gregoire's, Washington Learns 18-month comprehensive review of the state's education system. The College Bound Scholarship was intended to make college more affordable and accessible, raise educational attainment, and create a college-going culture in Washington. The College Bound Scholarship promises college tuition at public institution rates and up to $500 a year for books to low-income, middle-school students who work hard in school, stay out of legal trouble, and successfully apply to a higher education institution. The amount of the Scholarship award is combined with a State Need Grant and other state funding and is implemented through the college or university as part of a financial aid award. Because of this, all students are required to apply for financial aid by completing the Free Application for Federal Student Aid (FAFSA) during the senior year of high school.

The Washington Student Achievement Council (WSAC) administers the College Bound Scholarship. A WSAC staff member stated, "We are the official state administrators of the program, and we maintain the integrity of the law." The vision is to improve high school graduation rates as well as postsecondary-enrollment and completion rates for low-income families. CBS is a "last-dollar" scholarship that pays the difference between other state financial aid the student receives and in-state public college tuition and a small book allowance. The CBS can be used at approved Washington State 2 and 4-year public and private colleges and universities. Eligible 7th and 8th grade students can sign up for this early promise financial aid. To remain eligible for the scholarship, College Bound Scholars are required to maintain their grades (2.0 minimum), stay out of legal trouble, and attend school regularly and have a family income that is 65% of the state's median family income or less. A WSAC staff person said, "I see this as a great opportunity for outreach. I know that 7th and 8th grade is a key time. I liked that they had to be good and not commit a felony and that they need at least a 2.0. I like the flexibility, age, and that you give kids hope."

The Washington State Legislature initially allocated funding for CBS. In 2007, they allocated $7.4 million to pay for the CBS program. Funding has grown to more than $12 million, which was expended in the first year of payouts. The 2013 Legislature provided $36 million for the 2013-2015, biennium.

From 2007 to 2013, more than 151,600 students have applied for CBS in Washington State (WSAC, 2013). For the first four cohorts, approximately 64% of eligible students applied. Since then, the percentage has increased. For example, for the first cohort (2012 graduates) 57% of eligible students applied, but for the fifth cohort (2016 graduates), 80% of eligible students applied for the scholarship. This growth has been credited to the increasing number of applications by 7th graders across the state, which has been attributed to targeted outreach, school and district support, and strong partnerships between the K-12 system and various community-based and college-access partners and non-profit organizations. The largest percentages of applicants were White (42%) or Hispanic or Latino (33%). Eight percent of applicants were Black, 8% Asian, 6% multiracial, 2% American Indian, and 1% Native Hawaiian/Pacific Islander.

The first cohort of CBS applicants graduated in 2012. CBS recipient data from WSAC show that 15,947 students from the class of 2012 applied for a CB scholarship. Of those, 9,657 (57%) students filed a FAFSA, 4,760 received a CBS, and over 2,600 students were not awarded a CBS for various reasons relating to ineligibility.

One of the partners that work closely with CBS is College Success Foundation. They have provided placement of College Bound Regional Officers in all nine Educational Service Districts in Washington State to assist individual schools, counselors, and teachers in reaching CBS-eligible students. Other strategies include community wide sign-up and support events at local colleges, as well as personal letters from the school to eligible families. Another partnership between CBS and Office of Superintendent of Public Instruction (OSPI) of Washington has culminated in a data sharing agreement that allows schools and the Washington Student Achievement Council (WSAC, formerly known as Higher Education Coordinating Board) to monitor the progress of College Bound students. One person noted that having multiple partners increases the complexity of the program. For example, one person reported, "The entity responsible for signing up students does not report to the entity responsible for administering this program. We have to work hard to make the non-formal connectors work and to have partnerships that use similar language."

EVIDENCE OF IMPLEMENTATION

To identify the supports currently in place for the College Bound Scholarship, program researchers interviewed various stakeholders including Regional CBS Officers from the College Success Foundation, college practitioners, and College Bound Scholars. Additionally, focus groups with administrators, counselors, teachers, and students who signed up for the CBS representing the top and bottom performing schools indicated by rates of College Bound Scholars who graduated high school, attended college, and were awarded College Bound Scholarships is integrated within the report.

College Bound Scholarship Support, College Success Foundation Support, and Impact on School Systems

Stakeholders believe the CBS as well as the support by the College Success Foundation will help to impact the culture of school systems and students. The Washington Student Achievement Council (WSAC) website describes the CBS as "a program encouraging low income, middle school students to choose a path that will lead to educational success after high school." During focus groups, CBS stakeholders described that the vision is to change the culture in school districts by providing hope and inspiration to low income students to attend and persist in college. CSF interviewees stated they have already witnessed whole systems change in counties through CBS work, and their goal is to help build capacity of school and district personnel. CSF personnel stated their support is mostly provided through coaching, training, developing partnerships (within and among schools), and creating capacity based on the needs of College Bound Scholars. When we asked specifically, what these supports look like, one CFS interviewee commented,

> Everyone is different. It can range from as simple as dropping in at school and reminding them [school staff] that you're here, to something like helping facilitate online sign-ups, or

> hosting a table or helping with sign-ups in conferences. [We provide] classroom presentations with students or sometimes parent meetings and presentations. [Additionally] we meet with community members and organizations. We also work a lot with leadership at schools to help spread the word and motivate their building staff. We work with AmeriCorps, GEAR UP [Gaining Early Awareness and Readiness for Undergraduate Programs], and AVID [Advancement Via Individual Determination]. It really is about meeting them [school staff] where they're at.

A CSF interviewee additionally described the positive impact CBS can have on every student, **"**One success for all of us is when we see middle schools or high schools participants own the work and incorporate it into the standard cadre of what they do – it's no longer separate. They use it as a leverage to see all their students. We've seen college posters show up all over the school, pennants, etc., to create a college culture at schools." Interviewees also indicated systemic support starting from the district down to the individual College Bound Scholar. However, CSF personnel acknowledged that this is not occurring consistently across the state, and instead it occurs in pockets. One CSF staff members shared a positive example,

> Districts are starting to mark in data systems that a student is a College Bound Scholar so they can do outreach to them. There is grade level outreach with College Bound Scholars at one school, by targeting them for a yearly event. Some schools are making sure they are doing what they need to. Counselors have changed their outlook. That's when I can see the culture changing. They have a new idea of who is capable of being a College Bound Scholar.

Further examples of success focused on school and district personnel's ability to help partnerships "own" the CBS program, to develop relationships, and to create awareness among the entire community about the opportunity for low-income students to take part in the scholarship. Further, some middle schools have begun populating the CBS enrollment form to assist with signups. Ultimately, stakeholders reported an increase in some schools reaching 100% CBS sign-ups for eligible students. Anecdotally, CSF personnel report that the culture change is most obvious in middle schools, as they have been working on signing up students for several years. CBS personnel believe high school cultures will begin change, as school personnel see student attend college.

College Bound Scholarship Support and Student Impact

Overall, students agreed the incentive and promise of the College Bound Scholarship helped motivate them and encourage them to attend college. CBS students did not believe that they received additional help in preparing for college by virtue of being in the CBS program. Instead, the vast majority of student interviewees cited the financial incentives as the most influential aspect of the CBS. One student shared, "I have more opportunities because of the money. So many people I know can't pay for college. This gives me the extra oomph I need to go to school." Another student stated the CBS: "Gave me a goal to keep my grades up to earn the scholarship. It kept me on track and made college an opportunity for me." Several students noted that College Bound was not available to students just a few years ago. One young man stated, "It's a huge help. People before

weren't so lucky. My brother didn't have this opportunity seven years ago. Now it's much easier for us – it lets us focus on what college we want to go to."

On the topic of flexibility, several students commented the CBS allowed them to choose among a wide variety of two and four year institutions in Washington State. On the online survey, students were asked if they had changed their college choice after receiving the CBS. While only a few reported changing their college selection (18%), those who did cited such reasons as proximity of the school to their home, class size at the selected institution, amount of funding at different institutions, and the perceived prestige of the chosen institution. Some students also reported that they decided to attend an in-state college to use the CBS. One student stated, "I decided to stay in-state because the scholarship would not apply to me if I moved out-of-state." For other students, the additional scholarship funds made it more feasible for them to apply to a 4-year college rather than a 2-year college. A student explained, "I was able to choose a university instead of a community college because I had a little more money to spend." Students also noted the ease of enrollment and clear qualification requirements for the CBS as aspects they like about CBS.

College Bound Scholar interviewees further described the positive influence CBS has on students who might otherwise not have been able to go to college, and how it can "motivate you to do something with your life" and gives you "the support of knowing someone is behind you," particularly when you are a first generation college attendee. In fact, on the online survey, students who applied for the CBS were asked whether they changed their high school behavior as a result of being CBS enrollees. Most College Bound Scholars responded that they maintained a higher GPA and they were motivated to graduate high school because of the CBS, and about half reported that they took more rigorous courses because of the scholarship (see Figure 1). Many students also enrolled in Running Start (21%) or Advanced Placement classes (63%) (see Figure 2). One participant noted, "I took the best courses and focused on graduating." Some College Bound Scholars responded that they had always been motivated students and that the CBS was not necessarily a driving force behind their achievement, but that it acted as a kind of reward for maintaining their high expectations and meeting goals.

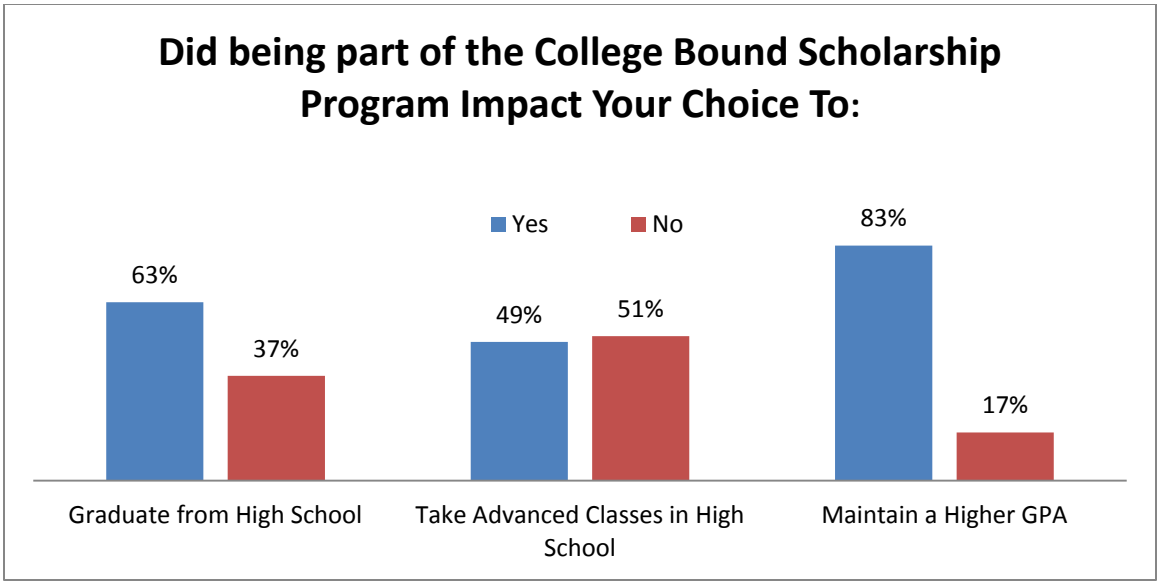

Figure 1. **Impact of the College Bound on high school graduation, class choice, and GPA**

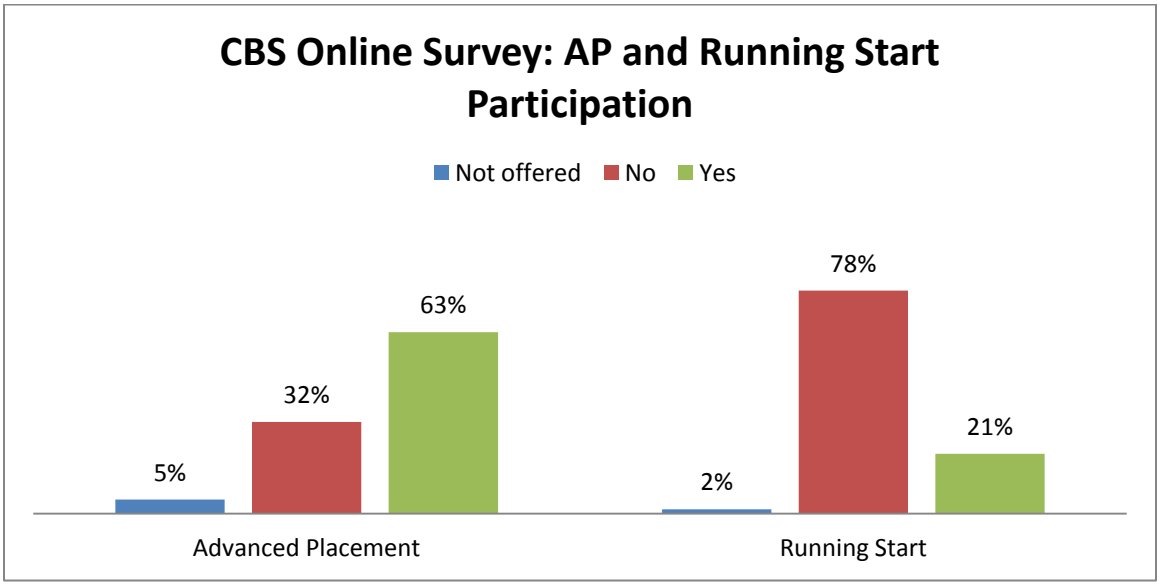

Figure 2. **Advanced Placement and Running Start Participation**

While the majority of College Bound Scholarship interviewees had similar positive impact stories, some stand out, such as the young person who reported completely changing her habits and quitting drug usage due to the requirements of the CBS. Another College Bound Scholar testified that being a part of her school's CBS community "helped me in social aspects. I was a quiet person and it helped me be able to voice myself to teachers and students as well." The CBS opportunity clearly impacted some students to a great degree, as the following College Bound Scholar stories illustrate:

> It completely changed the person I was. I planned to quit in middle school, and this [scholarship] gave me hope to shoot for something. I was suspended a lot and had major attendance issues. This changed who I was.
>
> At first, I didn't believe I wanted to go to college because I had negative views about my financial situation. My family was really poor. I had a mentor who reminded me I was College Bound. I had a promise that I had some money to go to school. That was probably [my] sophomore year. I was down in the dumps. I didn't think I'd go to college, that I'd work the rest of my life. But, College Bound was a reminder that it was an opportunity for you to have a higher education.
>
> I changed my high school behavior because of this scholarship because it made me more serious about attending college. I had a lot of friends that didn't want to go to college after high school. Most of them joked around and said something like I am going to the military and work at a gasoline station, or something along the lines of that. I started to look for college resources to get myself prepared for college. I started to be little by little more school oriented, like going to class and doing my homework. When I signed up for this scholarship, I signed up for AVID at the same time. The two things came at a precise moment in my life where I considered college to be my first choice to be in after high school. I chose to hang out with people that had the same academic goals as I have. I started to spend time in the library doing my homework and looking for help online.

These stories show that the promise of the scholarship greatly impacted some students. In contrast, several students noted that their high school experience was not changed by being College Bound Scholars because they had mostly forgotten about the scholarship through the course of their high school career. In these cases, students reported that school personnel did not talk about the scholarship and did not provide support and reminders about college. In some cases, students did not access the scholarship or lost eligibility because of these issues. One student explained, "We need reminders about the scholarship because some of my friends forgot, and they did not maintain the 2.0 GPA." Another student explained,

> One way that I would improve the College Bound Scholarship Program is to have staff explain more about this program all through the high school years. In my experience, I was introduced to this program in my final year of middle school. To be completely honest, the topic of this scholarship was not brought up in my high school until the beginning of my senior year. Nonetheless, it would have been helpful to be informed about this scholarship every year through my senior year to be completely informed about the requirements of this scholarship.

Middle School and High School Level Supports

This section includes College Bound student's and high school staff members' perspectives of the support systems in place in middle and high school for college preparation. In addition to student survey responses and phone interviews evaluators followed up with five high schools that have a

large proportion of College Bound Scholars attend college compared to five high schools that did not to determine if some promising practices occur.

School Resources for College Preparation. In general, College Bound Scholars reported they received some college preparation support. However, the depth and frequency of this support varied. According to the online survey results below, students reported receiving the most support in the areas of academic support, financial aid, and college expectations, while the least amount of support surrounded college mentors and college visits (see Figure 3).

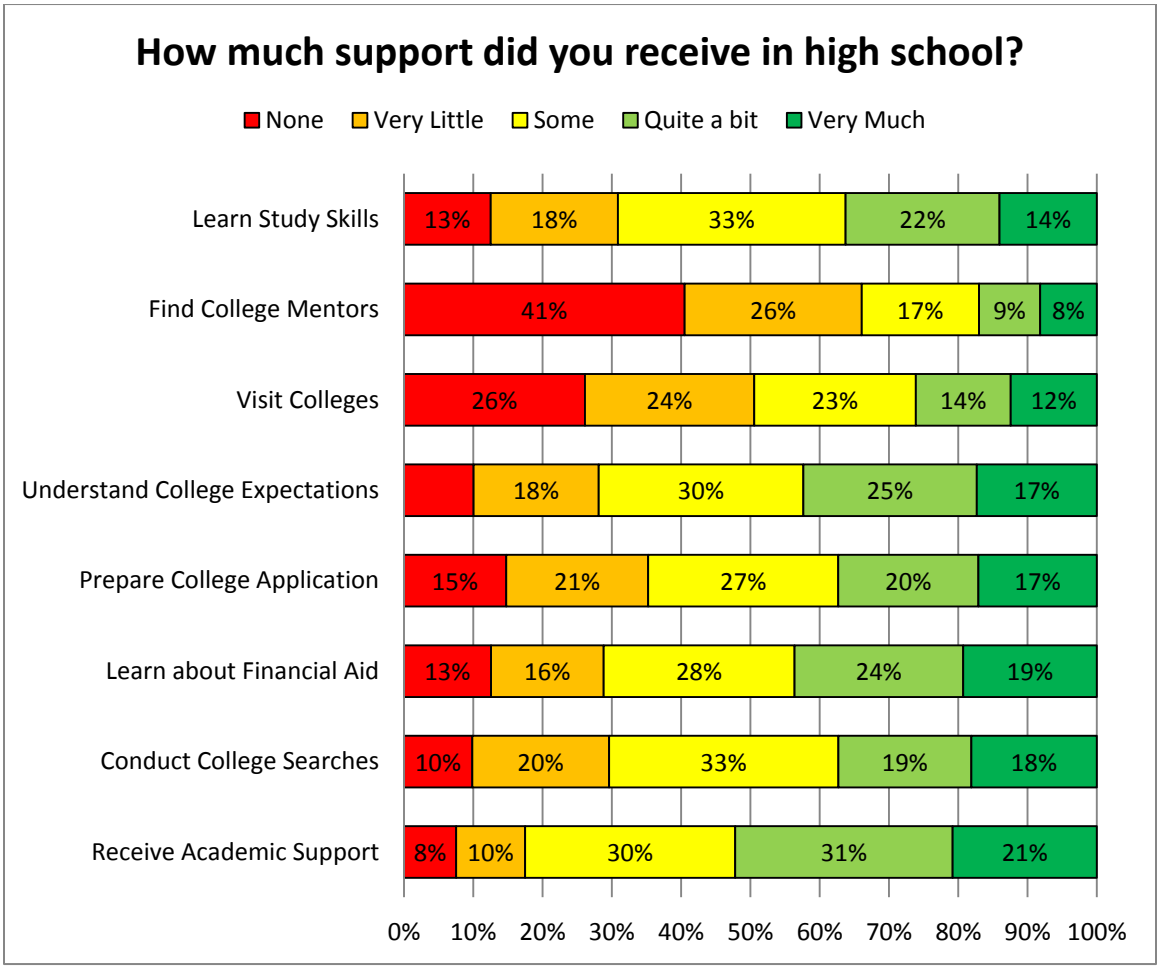

Figure 3. **High school support received by College Bound Scholars**

During interviews, students reported school counselors, teachers, college campus visits, high school workshops, and college fairs as being the most helpful school resources in preparing them for college. Specifically, counselors and teachers assisted students in developing high expectations, provided persistent encouragement in academics, and assisted students with career planning. School counselors were also instrumental in applying and filling out the necessary paperwork for college and providing information about FAFSA, in addition to working with scheduling classes. However, College Bound Scholar phone interviewees indicated these valuable school resources are not available frequently enough.

High school personnel indicated similar resources were available for college preparation in addition to culminating project activities and schoolwork specifically tailored to college skills and expectations. Schools with higher college going rates for the College Bound Scholarship reported an increased intentionality for the College Bound Scholars and a greater focus on college preparation. Examples of college preparation included having ongoing discussions with both high school and middle school staff about the CBS, providing students with one on one support, tracking students with less than a 2.0 GPA, and working with students at each grade level to prepare students for college. One staff member commented on their school's expectations for their students:

> We have a lot of things that we expect our kids to do such as fill out an application, fill out FAFSA, make sure they have a resume and community services documented. We fine-tuned it to the things that students need to do to get into a university. Our top students were already accepted [to college] by January then they were going through Navigation 101 lessons about going to college. We changed the schedule to make it match up.

In contrast, schools with lower rates of students using the CBS did not provide specific support for the CBS students. In addition, at some of the schools, school personnel acknowledged that they did not necessarily know who had signed up for a College Bound Scholarship. One student said, "I think the program could be improved by keeping track of the youth who sign up for the College Bound Scholarship; throughout the high school years, many students start flunking out. I think the College Bound Program should offer support of the counselor and other sorts." Another student shared, "One way to improve the program is to not wait until the student's senior year of high school to make them familiar with the program. My high school did not tell us anything about what we were supposed to do, and I felt rushed at the last minute."

College Awareness and College Preparation Programs. College Bound Scholar phone interviewees identified an expansive list of programs offered among high schools, that provided college preparedness and college-ready skills curricula, including AVID, GEAR UP, Navigation 101, Upward Bound, Achieving a College Education (ACE), TRIO, etc. Part of the college preparation theme among high schools with high rates of college going College Bound Scholars consisted of greater program availability for students to increase college awareness and preparation compared to high schools with lower rates of college going College Bound Scholars. These schools mentioned program opportunities beyond the typically listed programs with the addition of College Access Now, CSF's HERO and Achievers programs, Americorps, various mentoring programs, and even the transition to a STEM school

Beyond college preparation programs, student interviewees often noted that their advisors and advisory classes helped prepare them for college by assisting in test preparation and helping them locate and attend college fairs and campuses. Advanced placement and Running Start classes were also mentioned consistently, and one student called Running Start, "an awesome opportunity for me. It gave me exposure to college life. It helped me grow up a bit more."

While students who participated in these programs tended to find value, it is notable that a number of students did not participate or have access to these programs. Overall 29% of students

responding to the survey reported that there were not high school programs offered to help prepare for college. Figure 4 shows the results for individual programs, including whether students had access to the programs and if that program supported the student. When students participated, approximately half of students reported these programs helped to prepare them for college. During interviews, students described great variation in the way the programs ran.

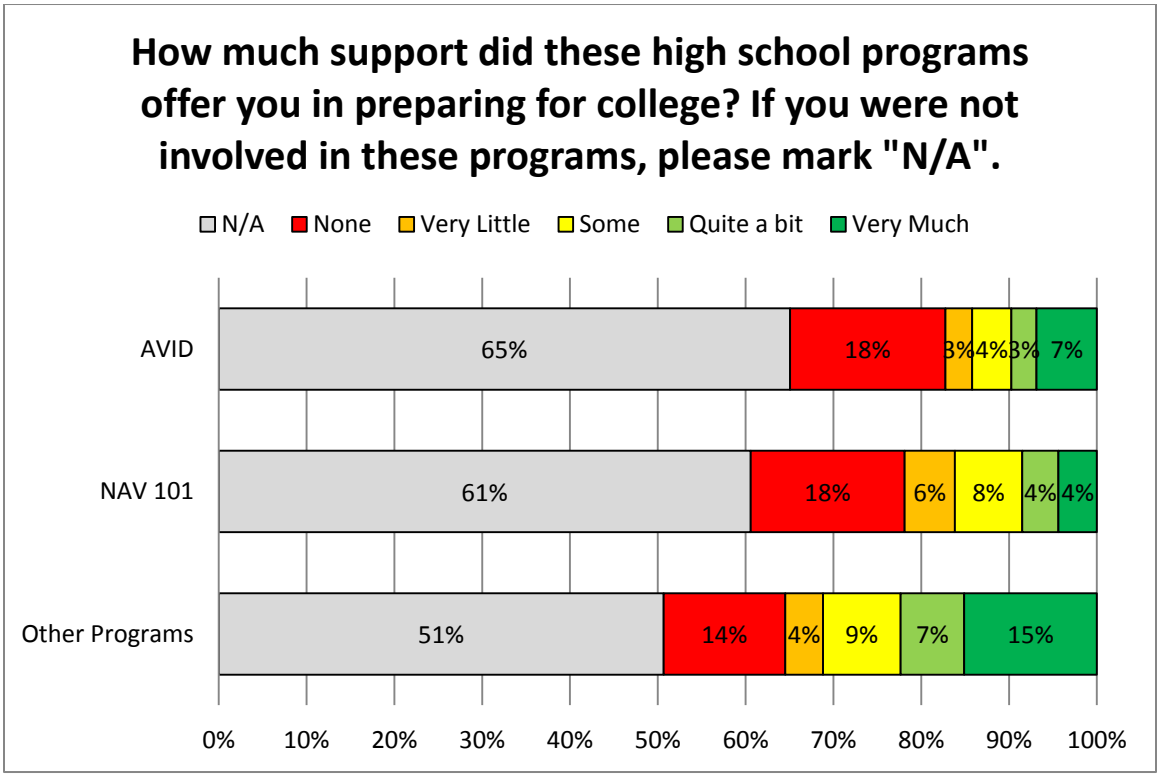

Figure 4. **Support of college preparation programs in preparing College Bound Scholars for college**

College Bound Scholars who found value in the various college preparation programs stated these resources helped them by providing assistance in searching and filling out scholarships, college applications, and FAFSA; by visiting college campuses; by taking advanced courses sometimes with college credit; by developing study skills; by providing mentoring, and by having discussions about the college environment. The most frequently mentioned programs were AVID, GEAR UP, Navigation 101, and TRIO. College Bound Scholars noted that GEAR UP provided beneficial college visits and helped students "learn what schools require, and to explore options." Likewise, one interviewee commented about AVID, stating the program, "helped me apply to scholarships and taught me how to write personal statements." These programs clearly have an impact on student college awareness and preparedness when they are administered adequately in the schools. In recent years, most of the high schools increased the capacity of their college preparation support programs, stated staff members.

When College Bound Scholars were further asked what aspects about these programs were most helpful in preparing them for college, setting goals for college, writing research papers,

understanding expectations for post-secondary education, and Cornell Notes (a significant portion of the AVID curriculum), were the most frequent responses.

Staff Understanding of College Bound. Staff members and students affiliated with the College Bound Scholarship program possess a wide range of knowledge regarding the programs eligibility requirements and reward system. In general, staff members at high schools with high rates of college attendance for the College Bound Scholars have staff members and students who more clearly understand the specifications of College Bound. Staff members clearly believed that they could describe the aspects of the scholarship or that they had someone on staff who could provide information. This is a critical piece because when there is a clear understanding of the scholarship process then students can better understand their requirements and the scholarship is kept out in front of the students.

When schools do not have adequate information or a strong point person, then students perceived that they were misinformed. In some cases, students were not able to use the scholarship or were greatly disappointed. For example, a WSAC staff member shared, "Key messaging … it isn't complicated, but people spin in. For example, some counselors shared that this was a full ride." A student shared, "There needs to be improved communication. I was told one thing by the College Bound Program team and something completely different from my high school counselor." Many students shared stories that they believed the scholarship would cover tuition plus additional costs. One college student said, "It was made into a bigger deal, and I was told I would get more than I did. I got a $1,000 per year, but they said it would pay my full tuition, which it didn't." Others signed up, and they did not understand that if their income changes, they would no longer be eligible. One student responding on the survey wrote, "Don't tell people they get money for college, and then when they finally get here, you tell them they make too much to qualify. I was VERY, VERY disappointed they would not give us any money for college expenses. There isn't any advantage to this program. We are not TOO rich." Furthermore, some non-documented students were under the impression they would qualify for the scholarship, and they were disappointed when they did not.

Support for College Bound Scholars. Clearly, there is not particular program of support for students who sign up for the College Bound Scholarship program. WSAC helps to administer the program and the College Success Foundation assists with sign-ups and outreach. Some schools that have had success in signing up students and having students access and use their scholarship after high school have identified students who signed up for the scholarship and have aligned college information and support programs to meet students' needs. Most stakeholders believe the sign-up efforts at the middle school level are stronger than the support that is currently provided at the high school level. This is largely because there are no requirements at the high school to provide support.

Support provided by College Bound is predominately through monetary rewards to students, with the intent that the early promise will give students the hope and motivation to attend college indicated staff members. One staff member, at a school that has fewer students using the scholarship and limited additional support, commented,

> For the really advanced kids who understand the concept of paying for college, College Bound is great. For the kids who don't have the motivation to go to school then it's not a motivation for the lower achieving student. The scholarship is not going to change their caring.

According to CSF and WSAC personnel, most of their focus has been on middle schools signing up students for the scholarship, and both groups reported a need to have a "champion" within each high school to help support the College Bound Scholarship. High school personnel typically reported there was minimal to no support. A few high school staff members commented on their involvement with College Bound representatives:

> There is no support. We used to have a College Bound representative in this area and [they] would stop by and check on us throughout the year. We never had any events or workshops to support us as an individual school though. The representative who visited us last year is no longer with the program and I, have not been told who the new person for this area is. To my knowledge, I am not aware of College Bound workshops.

Another staff member, shared a different perspective of middle school level support from College Bound, commented:

> Being my first year at the school, they [College Bound representatives] have reached out to me and visited me at the school and presented to 7th and 8th graders, and helped me merge our skyward records to the College Bound application so all we have to do is get signatures from students and parents. They have also given access to PowerPoints and counselor trainings.

Beyond support from College Success Foundation and WSAC, some staff members commented on the practice of other college preparation programs targeting College Bound Scholars, such as Upward Bound, College Access Now and the DREAM project. One staff member stated:

> The DREAM project has been calling College Bound students, but there is no designated College Bound person. It is important to have someone dedicated to freshman. Most of the dropouts happen in their freshman and sophomore year.

Staff member interviewees indicated there is no specific role of anyone at their high schools to work with the College Bound Scholars, typically the school counselors or college and career readiness coordinator takes it upon themselves to work with College Bound Scholars. One staff member commented they work with College Bound Scholars by:

> Figuring out who those students are. In the beginning of the school year, I log onto the portal to pull a list of the students. There is a huge gap between them signing up in middle school and then their senior year, concerning tracking, monitoring, or information sharing. We get a lot of students who aren't sure if they signed up. I help students identify whether they are in the program. We put out a monthly newsletter and we put a link to where

> families should go if they have questions for College Bound. Families are not sure about it, so we point them to where they can get their questions answered.

While some staff members stated they encourage College Bound Scholars to apply for additional scholarships and fill out the FAFSA, the overall approach by most high schools interviewed is that all students are treated the same with no additional support given to College Bound Scholars. When there were clear efforts of a "College Bound Scholarship Champion" and an aligned system of support, more students appear knowledgeable of the scholarship and take advantage of the opportunities.

College Level Supports

Cohort 1 of CBS completed their first year of college during the 2012-2013 academic year. Currently, college level supports for College Bound Scholars is in the early stages of development at the college level. As a result, stakeholders from CSF and partnering college institutions are in the early stages of creating frameworks of support for College Bound Scholars attending college. One CSF participant commented on the current college level support:

> They're starting to build it. They are identifying touch points who can be that person. In my area, every college has it and is doing intentional outreach to those students. Those counselors and college staff are working with high school staff as well now. There is a mixture of appointed and volunteer leadership. One university even wrote a curriculum and they are going to pilot it at a local middle school.

College representatives described a variety of ways they support CBS recipients, which include, increasing communication across the spectrum, developing curriculum alignment with high schools, providing outreach to middle and high schools, providing summer institutes and prep courses, developing a data tracking system, providing mentoring to CBS recipients, and conducting ongoing focus groups to identify specific needs of College Bound Scholars. However, most acknowledge this support is institution specific, in the early stages, and is for different scholarship recipients rather than CBS specific. A representative from Seattle Community College commented,

> We have a bunch of initiatives on the ground and in development. Most of these are supported by our Gates Foundation partners. We have a Compass Prep course, and a vast majority of our students go to that workshop. They learn they need to practice for this test, and that has been successful. We are instituting mandatory registration for all students. We have instituted different math pathways for developmental math. We have computer based instructional tools to supplement and become more adaptive through the developmental track. We are developing an advisor dashboard that is an early warning system. We are trying to use the technology to get ahead of the game.

The representative from Pacific Lutheran University also commented about how they are leveraging College Bound on their campus:

> Our focus is targeted and we work with CSF, and they are instrumental in the outreach department. Since we are a private school, students don't think we are affordable. The CBS has actually provided ah ha moments, and students realize they can go to a private school. I think we are still evolving, but our strategy is our connection to HERO the [Higher Education Readiness Opportunity] program and the Achievers program. We are making more collaborative connections. If we are doing a special event at a school, they draw in the TRIO folks or other college going students. We have a partnership with CSF, which is our number one strategy. We are part of the Act 6 scholarship, which provides scholarships to first generation students in Puget Sound and Spokane. …Through Act Six, we have a leadership initiative, for students who apply, but don't get it. We have funded them with extra support. Many of those are CBS students.

Focus groups with the CSF Regional CBS Officers and college representatives indicated supports are available for College Bound Scholars on college campuses with the intent to continue development; however, during phone interviews, College Bound Scholars indicated varied levels of support while attending college.

On the online survey, College Bound Scholars (full year attendees and partial year attendees) mostly agreed the CBS was critical to them attending college (see Figure 5). In fact, 85% of full-year college attendees reported the scholarship was critical to attending college. In addition, just over 50% agreed they could not continue to attend college without the CBS. This suggests that the financial support and participation in the scholarship was critical. However, interviewees disagree whether being a College Bound Scholar has provided them with a network of friends or relationships with other CBS recipients. More importantly, only approximately one-third of students reported that they have support on the college campus. This result was actually more positive than phone interviews. During the phone interviews, students implied there were minimal college supports, and they were not able to provide specific examples when prompted.

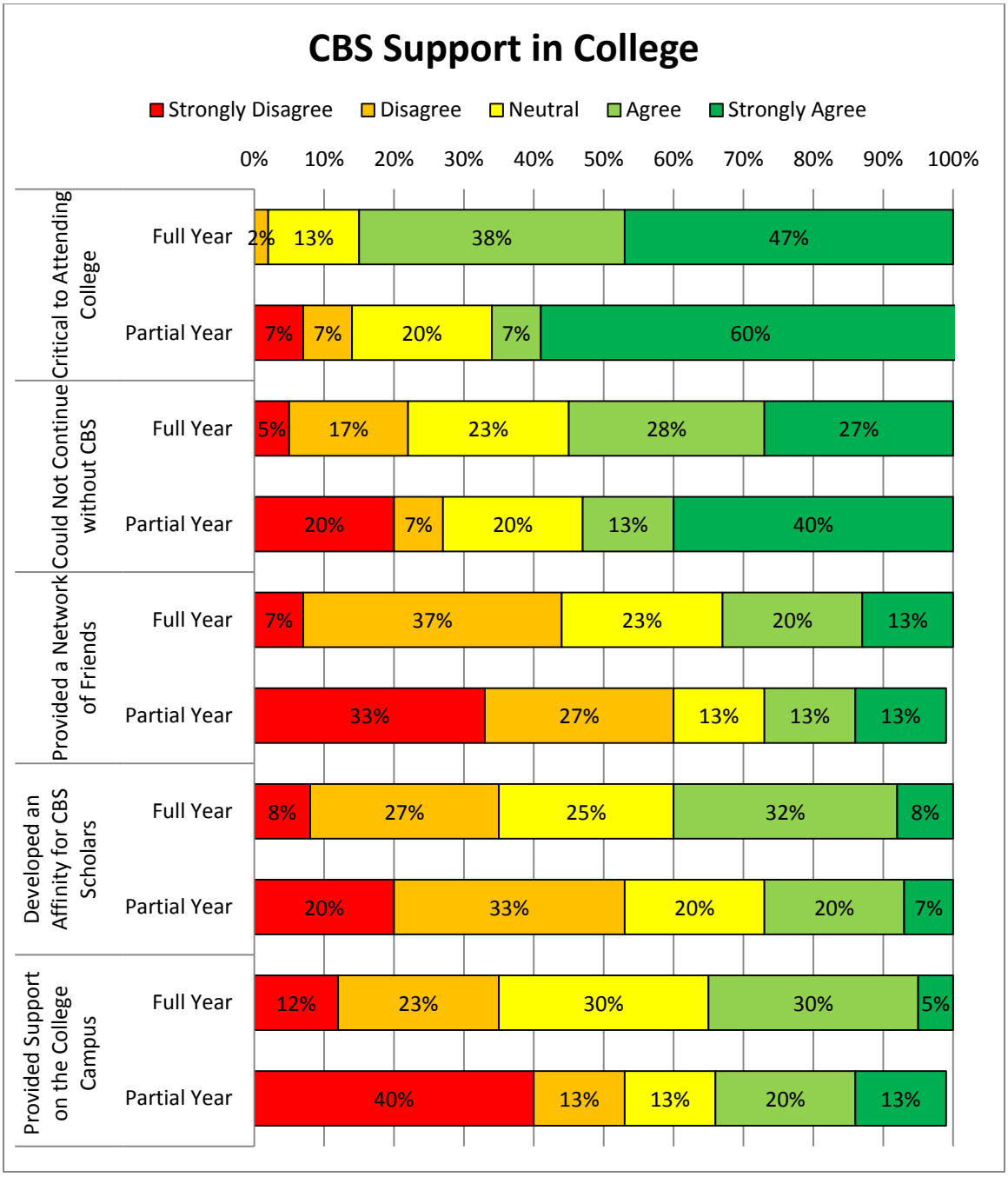

Figure 5. College Bound Scholarship support for College Bound Scholars while Attending College Part or Full-Time

Perspectives on College Persistence

Researchers asked students about their first year of college. When asked what the easiest part of their first terms of college had been, interviewees highlighted two themes: (a) social networking such as making friends and getting involved in campus activities, and (b) maintaining decent

schedules and completing coursework. As one young mother said, "I like to learn. It's fun, and I like to go to school." College Bound Scholars particularly enjoyed planning their own schedules and choosing courses they are interested in. Additionally some interviewees stated receiving tuition and utilizing campus resources was an easy part of attending college.

Overwhelmingly, phone interviews with College Bound Scholars who attended part or full-time college shared a common belief they will graduate college. Specifically, for the students who did not enroll full time or for the whole year during the 2012-13 school year, they nonetheless exhibit strong beliefs in the importance of earning a college degree and an equally strong intrinsic drive to complete their post-secondary education. Furthermore, all full-time student interviewees believe they will graduate from college, and roughly 80% of these interviewees have a specific degree or career choice they are working towards. Of those who did not identify a specific degree, they referenced having a goal and or motivation to obtain their degree. One student shared, "Because I had a scholarship and it encouraged me more. I know I want an education before I go on with anything else in my life. I have a passion for nursing, and I know to get into that I have to graduate from college." Another commented, "Yes, because it's the only way I see myself having a better future and being able to support my family in the future." Lastly, one commented on their belief they will graduate from college "because I am doing well, I know all the requirements and I am getting good grades, I have the confidence, and I am committed to the goal."

Contextual Issues

This section identifies the contextual issues that may help or hinder implementation of the College Bound Scholarship program.

Lack of Leadership Support. In a focus group with regional support personnel from CSF and WSAC personnel, we asked about the experience of middle and high school outreach efforts. Personnel agreed that one of the largest barriers to effective outreach is leadership endorsement of the CBS program and school staff members feeling the pressure of competing initiatives on their limited time resources. For example, when a school has only one counselor "they are carrying a really heavy load" and "it's not because they're uninterested, it's a matter of time," commented one CSF staff member. Program support staff members agreed that investment on the part of school leadership is often the catalyst for a successful program as "once the leader shows support, it becomes less of a back-burner issue" even when time is tight. One person summarized, "To be effective, you need leadership support. If you make this part of the counselor's job description, support will happen, or if you made data accessible, students will sign up and be monitored. Leadership, K-12, they need to support this."

Resistance. Some schools have a culture of resistance, according to CSF personnel, and the support staff comes up against "excuses, some sort of stopping point to everything you suggest." Similarly, CSF staff members reported that some schools resist the assertion that low-income students are college bound. While they have seen a movement away from this perspective in middle schools over the past couple years, they report encountering it more frequently at the high school level at this point. Further, parents and guardians are sometimes resistant because they believe the scholarship to be "too good to be true" and do not respond actively to outreach efforts. Staff

members exhibited optimism about parent responses now that one cohort has gone to college with CBS support, and they hope that parents will respond more openly once students and community members share anecdotes about the college experiences.

This reluctance to interact with support personnel occurs in several regions across the state, and staff members believe it is due to trust issues in certain communities. One focus group participant noted that while they used to host large community events to raise awareness about College Bound, the events did not result in large increases in application rates and so they were halted. The important part of increasing awareness and participation, one staff member commented, was in embedding the CBS into schools so that it comes from a trusted school source and not an external entity.

Limited Program Support Structures. Perhaps the greatest barrier cited by students, CSF personnel, WSAC personnel, and post-secondary institution representatives was the lack of financial backing for developing holistic effective support systems for CB scholars. During interviews, very few students reported a comprehensive system of support for CBS. Usually, students reported they received support from a counselor or participated in a program in middle or high school that helped develop college awareness, but these efforts were uneven and not all students had access to these supports.

In contrast, participants cited the Achievers program several times for its focus on mentors and advocates who follow a student through high school and then transition the student to another mentor for the college years. Most representatives noted their desire to implement a similar program, but that the lack of funding inhibits their ability to create and sustain such a robust transition support system. One staff member further commented on the drawback of limited funding on student success in college, saying,

> I am thinking about so many students that do get signed up [College Bound], then it seems like a burden of ensuring students are meeting the expectations falls on the student and family, and only the school if the resources allow for it. Our school has only [limited access to] a career readiness counselor to help. College Bound is an amazing opportunity, but you give kids money in the first year of school and they bomb out because they are not prepared. Give students the money but ensure they are prepared to do their best with that money.

Another stakeholder shared, "For me the vision doesn't hold in touching the students in the access and participation part. That has organically surfaced in some areas. We have learned you can't just tell people they have money; they need more. For students not in GEAR UP, I don't know what happens."

College panel participants noted that it is imperative that some such initiatives become mainstream on their campuses if they want to increase college persistence and completion of the College Bound Scholars entering their ranks.

Data Access and Sharing. Frequently, the first barrier for schools to overcome is determining who is eligible for the scholarship, and then ensuring that those students receive consistent and constant outreach about the opportunity and follow-through as they progress through the grades. College Bound eligible students tend to have higher-than-average mobility rates, and staff members noted the difficulty in tracking the students. Due to this difficulty, they expect it must likewise be troublesome for schools to specifically target and support those students as they move around. Anecdotally, high school personnel reported that they often do not know which students have signed up for a CBS. CSF personnel noted that they are beginning to have successful partnerships with middle schools, but that they are still working to find a model of identification and tracking at the high school and college levels. They would like to be able to track GPA and early warning indicators for all eligible students. One high school staff member expanded on the need for a better data sharing system saying,

> I would love to work with them [College Bound Scholars] as a cohort. To have an easy way to be able to identify that this is a kid who has applied for College Bound so that it's flagged for scheduling and things of that nature. I can't think of a technical issue of why that wouldn't be possible. I can't imagine that there would be a challenge with creating a field for College Bound. We see lists from time to time, but that doesn't help me. I need to have that list in front of me when we are talking about classes to take. For kids who are in AVID we make sure they have what they need but there are College Bound kids who aren't in AVID.

For students, this lack of data sharing and tracking results in a lack of understanding and awareness about their status as College Bound scholars. Several students mentioned that they had not heard anything about the scholarship from when they signed up in middle school until they were seniors in high school, and some of them not until they had graduated. One student said, "It wasn't talked about much. Only one night senior year. You were pretty much on your own. I was frustrated." Several students reported having forgotten completely about the scholarship during their high school years due to the lack of follow-through from the high school. This lack of active monitoring of enrolled students impacts the likelihood of eligible students maintaining eligibility for the scholarship.

Outreach and Communication. Students frequently noted they did not receive adequate outreach and communication from College Bound personnel, and they had very little information about the scholarship. Participants reported they did not receive regular communication throughout high school, and would like to receive visits from a CBS representative periodically to keep them informed. Staff member focus groups frequently described CBS's current communication strategy as a barrier. One commented,

> Nothing is ever clarified and nothing ever breaks down to the way the money works. From the time they apply, there is a long space of time for them to forget they are involved. I applied with my granddaughter years ago, when it was mentioned to me, I had forgotten about it. The kids are going to forget. There should be a little communication from College Bound to the kids. It would be nice if the kids got things directly from the program. It would be good to talk to them. It would be nice for them to talk to them just when the

> GPA starts to drop. Provide some mentors or something to let them know what is happening now.

Students specifically described a need for more visibility of the scholarship in schools and among school districts to create greater awareness of the program. One commented, "I'd make more advertisements towards it. I went to a private school, and I had no idea about it. I didn't know it was available until I got into 9th [grade]. Make it more available for everyone." Nearly all interviewees agreed the lack of communication and readily available information was a weakness. One student suggested that CBS personnel "try to visit the kids more. I would have little get-togethers and even give out food to attract more kids. There are a lot of kids who say they don't want to do it because they don't see themselves going to college, but we could get them too." Similarly, another student recommended, "Send students newsletters and surveys to keep college bound scholarship students updated on the review of the scholarship and benefits they gain as a college bound student." Students who attended college in 2012-13 reported they would appreciate having a College Bound program on college campuses so that they could receive support from personnel and other students during the college years. For current college students who have the College Bound Scholarship, poor communication and lack of information was their greatest frustration with the scholarship. One participant shared,

> "I would provide more information throughout the years, as it was often confusing to me whether or not I would be receiving the scholarship. To further explain this point, I signed up in the program in middle school and was rarely contacted by the program until my freshmen year of college."

Limited College Preparation in High School. When asked which supports were the least helpful in preparing students for college, student interview respondents agreed that the biggest shortage of support was in the classrooms themselves. For example, teachers were not always aware of what was necessary for college preparation and some advisors simply did not have enough time to spend with students seeking advice and guidance about the college transition process. Similarly, students agreed that when courses or college preparedness curricula are not well-developed or delivered, they are less helpful in assisting them prepare for college. Students shared that they did not receive sufficient information on financial aid process and applications or on finding transportation to get them to-and-from classes. When asked about additional supports students would have liked to see at the high school level, most respondents replied that they would like to have greater exposure to college preparedness and awareness programs. Students noted they would have appreciated more help in choosing college-preparatory classes in high school and guidance on how to choose majors in college. An overarching theme across interviews was that students believe their teachers should have offered them additional academic support in high school to better prepare them for college. Further, additional college preparedness program offerings, college visits, advisory sessions, and application assistance were cited as supports students would have appreciated.

Transition from High School to College. College personnel cited concerns about the difficulties students face in the transition from high school to college. Nearly every campus representative on the panels noted the need to align course taking and college readiness standards. College staff members reported that a significant portion of CB scholars enroll in college without adequate

coursework to prepare them for college level courses. One panel member cited the discouraging results of their institutional research: "If you are four courses behind, you have a very low chance of completing. If you are three courses behind, your chance of success more than doubles. They need a fighting chance for a degree or certificate. We need to reduce the number of students who are three or four courses behind grade level." Some institutions have implemented special clubs or advisory-type courses for incoming CB scholars, but it is clear from both the panels and the students responses that these offerings are not consistent across institutions, nor are they advertised appropriately to all CB scholars when they are available. Results on the student survey show that many students (enrolled in two-year and four-year colleges) were or will be enrolled in remedial Math or in remedial English coursework (see Figure 6). This indicates that many College Bound Scholars are entering college without being college ready.

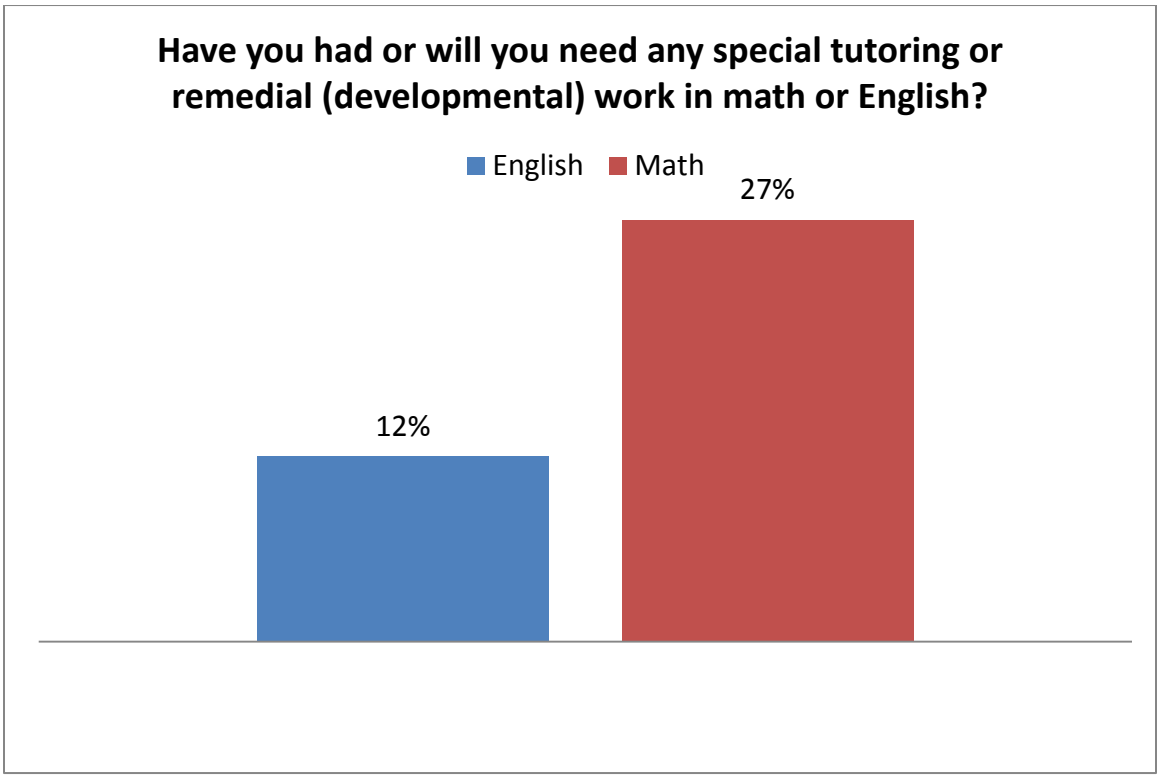

Figure 6. **Students who Stated They Enrolled in or Will Enroll in Remedial Coursework**

Limited Understanding of Financial Aid Awards. Another theme pertaining to the college bound scholarship program was students' desire for a better understanding of their financial aid standings. Many students stated they did not understand what CB covered in regards to their college expenses. One stated they wanted CB to "explain more fully the incentives and how money is broken down, some people received $500 for books, I did not and do not know why." Other students were not certain whether they received any CBS funding. Similarly, staff member interviewees described a lack of understanding among families regarding scholarship. One commented, "The CBS implication is that you will get money, many parents are uneducated or unfamiliar with scholarships and don't have college experience. To them a scholarship looks like a

scholarship, kids and parents don't know how to look farther." Another staff member further described the lack of clarity among CBS and financial rewards saying,

> There is a lot of misconception about the college bound scholarship. Families thought that meant it was a full ride. They are totally unclear. The first cohort that went through the program were the least likely to apply for additional scholarships because they thought it was paid for.

In addition additional college fees, living expenses, and travel costs surprised students. Many students suggested that the scholarship cover these costs, or if it cannot, then there should be more clarity. One student shared,

> The scholarship program gave the parents the impression the extra costs would be covered for a four-year college. We had to take out loans to cover the cost of living on campus. The loans that were taken out were the same amount as the loans that had to be taken out for my sibling who attended the same college without the scholarship.

Another student shared,

> The wording was confusing, it said all tuition and books would be paid. Only a small portion of books were covered, and then there were additional fees. Also, not knowing how much I would be getting until August was frustrating. Knowing earlier in the summer, so I can plan earlier would be appreciated.

At least two students on the survey reported that because of difficulties understanding what was covered and not having the money resulted in the decision to not attend college in the first year.

Students also emphasized the need for college financial aid offices to be fully aware of the CBS and how it should be applied to student accounts. Several students shared how confusion on behalf of their chosen institution led to incorrect or inadequate award distributions. In some cases, students who were assured the support from College Bound were surprised to find out that their financial aid representative was unfamiliar with the scholarship, and some students also reported not receiving aid even though they were expecting it. There is a great deal of confusion surrounding the award process and communication at the college level.

Systemic Challenges in College. College personnel noted a limited level of program support on campuses and the need to ramp up the supports offered. There were two primary needs identified by college staff: 1) an identification and tracking system, and 2) a higher degree of communication and community within the campus for CB scholars. One panel member reported, "About 30% of students on our campus are low-income, first generation, so we are trying to figure it out. This is just one subset, as we have Passport, Achievers, and other scholarship programs." Identifying all the different subsets and delivering the supports each needs is a difficult process for most campuses. A few institutions have already integrated a CBS marker into their data system and are using it as a tracking tool through application, enrollment, early indicators, and interventions. Unfortunately, at this point "CB is an orphan" and "Many college campuses have their key departments not talking

with each other," which creates the confusion in communication noted by student interviewees (see *Limited Understanding of Financial Aid Awards*). Further, because communication has varied widely across departments and institutions, the award letters are often confusing to students and can lead to misunderstandings in enrollment. Lastly, college staff members acknowledged the need to leverage data systems as well as social networking and multi-media resources to reach students on their campuses in attempts to build a community of CB scholars.

Personal barriers. In addition to system challenges, interviewees were asked about the individual challenges they anticipated (those not yet enrolled) or had experienced (those who had enrolled in 2012-13). Respondents cited concerns about the likelihood of having a faster pace for school and learning, increased expectations for course load and subject matter, and having to focus in order to get things done as the main challenges they anticipated. For example, one student noted that motivation may be challenged by newfound freedom, "which lends itself to apathy if you let it." One student described the anticipated challenges in terms of personal support during college, saying, "It is a different atmosphere. It's a much bigger group of people, and it will be harder to navigate around." Students who were enrolled in the 2012-13 school year reported that deciding which classes to take and completing coursework had been challenges during their first year. Similar to the anticipated challenges shared by students who had not enrolled in the 2012-13 school year, enrolled students noted that maintaining focus on school was also a significant challenge in their first terms. Furthermore, many students commented on the difficulty of the transition from high school to college (less personal environment, college campus, different structure to daily living). One commented on the need for effective resources to aid in the transition to college, saying,

> Building a community of significant resources, while there are a plethora of support, the ones that are critical to success need to be narrowed. A lot of people who get the CBS are from underserved populations. The academic infrastructure isn't there. The transfer from high school to college can be rough- and affects motivation. Support in academics and support in financial ability are the two biggest things.

EVIDENCE OF IMPACT: EVALUATION FINDINGS

Evaluation Question #1: What variables predict CBS students who graduate high school but do not enroll in college?

On the online student survey, 69 students reported that they did not attend college in the 2012-2013 school year (77 students skipped this question). The most common reasons cited were financial costs or other reasons, such as taking a year off from formal schooling, family or medical reasons, and the need to save money for work (see Figure 7). Of all the students who responded to the survey, two responded that they do not plan to enroll next year, and 15 responded that they were "unsure." The two students who do not plan to enroll in college cited financial reasons, and one reported that he was pleased with his current career trajectory in a retail corporation and did not know if going back to school would serve his career. The remaining students planned to enroll in the next year.

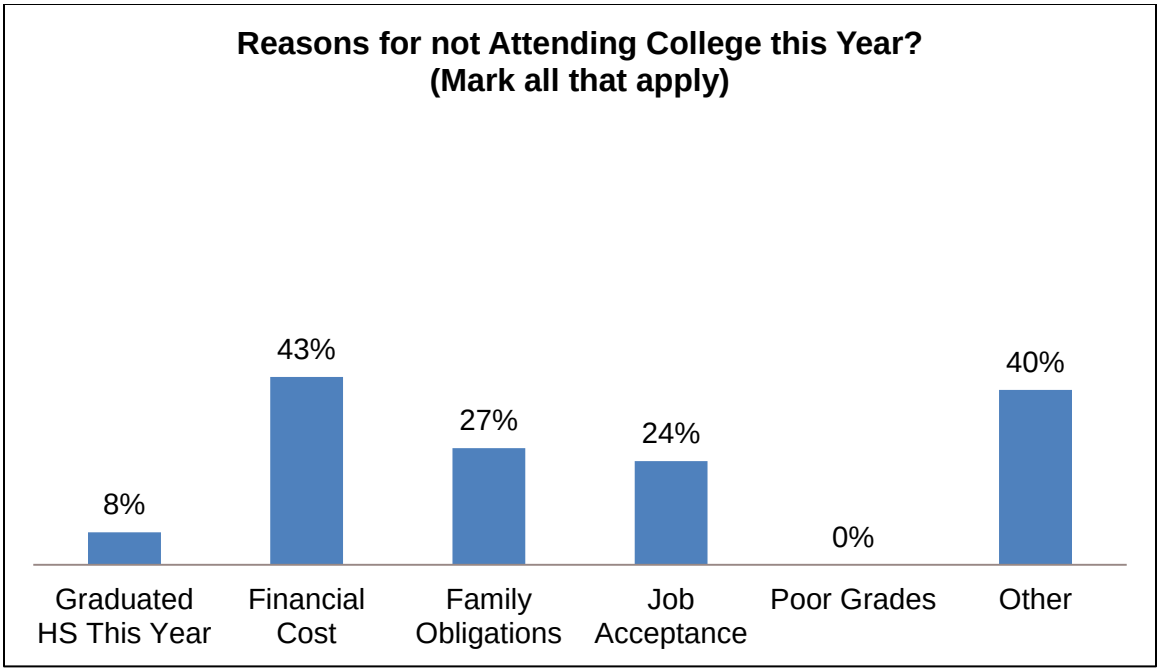

Figure 7. **Reasons for Not Attending College**

For this question, we also considered school- and student-level predictors of enrollment for students in the CBS program. We used a Generalized Linear Mixed Model (GLMM) to examine the effects of school-and student-level variables on college enrollment. The school-level predictors included indicators of school size and quality (i.e., total enrollment, average teacher experience, and student-teacher ratio); school level demographics (i.e., the percentage of non-White, male, and free/reduced lunch students); the proportion of students participating in career and college readiness programs (i.e., percentage enrolled in technical and college credit programs); and the school's participation in college awareness programs (i.e., Navigation 101 and AVID). The student-level predictors included ethnicity; gender; completion of college requirements in English, social studies, science, foreign, language, and the arts; the student's highest level of math; and grade point average. White and female students were the reference categories. Results are summarized in Table 4. Odds ratios below one have been inverted for ease of interpretation.

We did not find statistically significant relationships between school-level demographics or teacher characteristics with CBS student enrollment. However, we found a relationship between school's participation in Navigation 101 and students' enrollment in college. CBS students who attended schools with Navigation 101 programs were more likely to enter college directly after high school. The odds of enrolling in college were 1.38 times higher for CBS students who attended high schools with Navigation 101 programs.

We found several significant student-level predictors, including ethnicity and college preparation. Black CBS students' odds of enrolling in college were more than two (2.53) times higher than the odds for White CBS students. We also found that CBS students who met Washington state standards for science were also more likely to enroll in college. Completing the science requirement increased students' odds of enrolling in college by a factor of 1.44. Similarly, students'

math level was associated with their odds of enrolling in college. Each additional level of math increased students' odds of enrolling in college by a factor of 1.17. Participation in the running start program doubled (2.08) students' odds of enrolling in college. Finally, grade point average was positively related to student enrollment such that students with higher GPAs had higher odds of enrolling in college. Each point of student GPA increased students' odds of enrolling in college by a factor of 1.90 (Table 4).

In sum, we found that schools' participation in the Navigation 101 program was associated with increased odds of college enrollment for CBS students. We also found that White CBS students were less likely to enroll in college than Black CBS students. We also found that students who completed lower levels of math had lower odds of enrolling in college than students who completed higher levels; and that students who did not participate in Running Start had lower odds of enrolling in college. Finally, we also found that students with lower GPAs had lower odds of enrolling in college.

Table 4.

School-and Student-Level Predictors of College Enrollment

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	-3.78	0.02	43.97	1.62	-2.33	0.02
Total Enrollment, γ1	0.00	1.00	1.00	0.00	2.13	0.03
Percent of Teachers with Master's Degrees, γ2	0.00	1.00	1.00	0.01	0.51	0.61
Average Teacher Experience, γ3	0.07	1.08	0.93	0.04	1.91	0.06
Teacher-Student Ratio, γ4	0.00	1.00	1.00	0.03	0.08	0.94
Percent Non-White, γ5	0.00	1.00	1.00	0.01	-0.65	0.52
Percent Male, γ6	0.00	1.00	1.00	0.02	-0.15	0.88
Percent Free/Reduced Lunch, γ7	0.00	1.00	1.00	0.01	-0.29	0.77
Percent Technical Programs, γ8	-0.13	0.88	1.14	0.36	-0.37	0.71
Percent College Credit Programs, γ9	-0.73	0.48	2.08	0.49	-1.50	0.13
Navigation 101, γ10	0.33	1.38	0.72	0.17	1.93	0.05
AVID, γ11	-0.24	0.79	1.27	0.15	-1.53	0.13
Black, β1	0.93	2.53	0.39	0.22	4.14	<.001
Hispanic, β2	0.13	1.14	0.88	0.19	0.69	0.49
Asian/Pacific Islander, β3	0.37	1.45	0.69	0.20	1.88	0.06
American Indian, β4	-0.30	0.74	1.35	0.50	-0.61	0.54
Mixed Race, β5	0.55	1.74	0.57	0.30	1.86	0.06
Male, β6	-0.01	0.99	1.01	0.13	-0.10	0.92
Free/Reduced Lunch, β7	0.02	1.02	0.98	0.18	0.12	0.90
Met English Standard, β8	0.03	1.03	0.97	0.18	0.18	0.86
Met Social Science Standard, β9	0.33	1.39	0.72	0.31	1.05	0.29
Met Science Standard, β10	0.36	1.44	0.69	0.19	1.93	0.05
Met Foreign Language Standard, β11	0.16	1.18	0.85	0.15	1.07	0.29
Met Fine Art Standard, β12	-0.07	0.93	1.08	0.30	-0.25	0.80
Math Level, β13	0.16	1.17	0.85	0.06	2.51	0.01
AP/IB, β14	0.18	1.19	0.84	0.15	1.20	0.23
Running Start, β15	0.73	2.08	0.48	0.19	3.96	<.001
GPA, β16	0.64	1.90	0.53	0.13	5.07	<.001

Evaluation Question #2: What variables predict CBS students who enroll in college but do not complete their first year?

We used National Student Clearinghouse data to examine the college enrollment status for 6,346 students. Figure 8 shows the percentage of students who enrolled in college full time or part time (do not complete their first year) during the 2012-2013 school year. The vast majority of students enrolled in college full time.

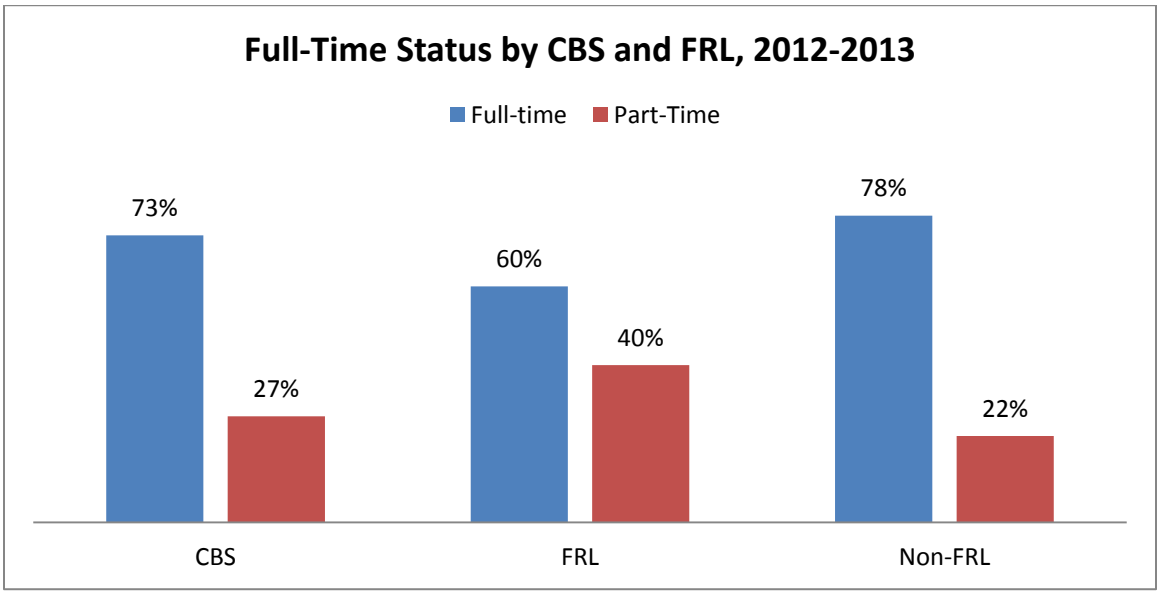

Figure 8. Full-Time Status by CBS and FRL, 2012-2013

We used a GLMM to assess between group differences in full-time status, controlling for school and student level variables. The analysis showed that, controlling for all other variables in the model, CBS students had higher odds of persisting in college than either FRL or Non-FRL students. More specifically, CBS students' odds of enrolling in college full-time were more than two times (2.22) greater than the odds for FRL students. CBS students' odds of enrolling in college were 1.24 times the odds for Non-FRL students.

Our results for first year completion were similar to the earlier model for college enrollment (see Table 5). Students who attended high schools with Navigation 101 programs were more likely to complete their first year of college. More specifically, the odds of students from these high schools were 1.29 times greater than the odds for students who did not attend a high school with a Navigation 101 program. We also found ethnic differences in first year completion. Holding all other variables constant, Black (1.72) and Asian American (1.42) students' odds of enrolling in college full-time were greater than White students' odds.

We also found differences in first year completion based on students' high school preparation in social studies, science, foreign language, and math. We also found that CBS students who completed higher levels of math were more likely to complete their first year of college. Each additional level of math increased students' odds of enrolling in college by a factor of 1.49.

Students who enrolled in AP/IB courses (1.45) or who attended Running Start (1.31) also had higher odds of completing their first year in college. Finally, GPA was positively associated with first year completion, such that each point of GPA increased students' odds of completing their first year of college by a factor of 2.90.

Table 5.
School-and Student-Level Predictors of First Year College Completion

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	-5.07	0.01	158.86	0.90	-5.63	<.001
Total Enrollment, γ1	0.00	1.00	1.00	0.00	-0.15	0.88
Percent of Teachers with Master's Degrees, γ2	0.00	1.00	1.00	0.00	0.28	0.78
Average Teacher Experience, γ3	0.02	1.02	0.98	0.02	1.25	0.21
Teacher-Student Ratio, γ4	0.03	1.03	0.97	0.02	2.09	0.04
Percent Non-White, γ5	0.00	1.00	1.00	0.00	0.93	0.35
Percent Male, γ6	-0.01	0.99	1.01	0.01	-1.04	0.30
Percent Free/Reduced Lunch, γ7	-0.01	0.99	1.01	0.00	-2.50	0.01
Percent Technical Programs, γ8	0.27	1.31	0.76	0.23	1.19	0.23
Percent College Credit Programs, γ9	0.13	1.14	0.88	0.28	0.48	0.63
Navigation 101, γ10	0.25	1.29	0.78	0.08	2.96	<.01
AVID, γ11	-0.15	0.86	1.16	0.07	-2.00	0.05
Non-Free Lunch Student, β1	-0.22	0.81	1.24	0.08	-2.69	0.01
Free/Reduced Lunch, β2	-0.80	0.45	2.22	0.09	-9.26	<.001
Black, β3	0.54	1.72	0.58	0.11	5.08	<.001
Hispanic, β4	-0.13	0.88	1.14	0.09	-1.47	0.14
Asian/Pacific Islander, β5	0.35	1.42	0.71	0.08	4.28	<.001
American Indian, β6	0.22	1.25	0.80	0.27	0.83	0.41
Mixed Race, β7	-0.09	0.91	1.10	0.13	-0.73	0.47
Male, β8	-0.03	0.97	1.03	0.06	-0.55	0.58
Met English Standard, β9	0.14	1.15	0.87	0.09	1.56	0.12
Met Social Studies Standard, β10	0.34	1.41	0.71	0.14	2.49	0.01
Met Science Standard, β11	0.42	1.52	0.66	0.10	3.98	<.001
Met Foreign Language Standard, β12	0.51	1.66	0.60	0.07	6.79	<.001
Met Fine Art Standard, β13	0.02	1.02	0.98	0.14	0.11	0.91
Math Level, β14	0.17	1.19	0.84	0.03	6.65	<.001
AP/IB, β14	0.37	1.45	0.69	0.07	5.76	<.001
Running Start, β15	-0.27	0.76	1.31	0.07	-3.91	<.001
GPA, β16	1.07	2.90	0.34	0.06	18.29	<.001

We also examined these relationships in the CBS student sample. The results were similar to the overall model. Students who attended high schools with Navigation 101 programs were more likely to complete their first year of college. The odds of students from these high schools were 1.64 times greater than the odds for students who did not attend a high school with a Navigation 101 program.

We also found ethnic differences in first year completion among CBS students. Holding all other variables constant, Black and Asian American students were more likely to complete their first year of college (see Table 6). Blacks students' odds of completing the first year were more than two times (2.38) the odds for White students; Asian American students' odds were almost two times (1.93) greater than White students' odds.

We also found differences in first year completion based on CBS students' high school preparation in science, foreign language, and math (see Table 6). Students who met the science requirement increased their odds of completing their first year in college by a factor of 1.74. Students who met the foreign language standard increased their odds of first year completion by a factor of 1.36. We also found that CBS students who completed higher levels of math were more likely to complete their first year of college. Each additional level of math increased students' odds of enrolling in college by a factor of 1.49. Students who enrolled in AP/IB courses (1.49) or who attended Running Start (1.44) also had higher odds of completing their first year in college. Finally, GPA was positively associated with first year completion, such that each point of GPA increased students' odds of completing their first year of college by a factor of 2.86.

Table 6.
School-and Student-Level Predictors of First Year College Completion

Variable	*Coefficient*	*Odds Ratio*	*1/Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	-6.57	0.00	712.58	1.58	-4.15	0.00
Total Enrollment, γ1	0.00	1.00	1.00	0.00	0.83	0.41
Percent of Teachers with Master's Degrees, γ2	0.01	1.01	0.99	0.01	1.01	0.31
Average Teacher Experience, γ3	0.07	1.07	0.94	0.04	1.80	0.07
Teacher-Student Ratio, γ4	0.03	1.03	0.97	0.03	0.78	0.44
Percent Non-White, γ5	0.00	1.00	1.00	0.01	0.26	0.79
Percent Male, γ6	-0.02	0.98	1.02	0.02	-1.13	0.26
Percent Free/Reduced Lunch, γ7	0.00	1.00	1.00	0.01	-0.63	0.53
Percent Technical Programs, γ8	0.08	1.08	0.93	0.36	0.21	0.83
Percent College Credit Programs, γ9	-0.36	0.70	1.43	0.46	-0.77	0.44
Navigation 101, γ10	0.50	1.64	0.61	0.16	3.11	<.001
AVID, γ11	-0.07	0.93	1.08	0.14	-0.51	0.61
Black, β1	0.87	2.38	0.42	0.20	4.23	<.001
Hispanic, β2	0.24	1.27	0.79	0.18	1.32	0.19
Asian/Pacific Islander, β3	0.66	1.93	0.52	0.18	3.64	<.001
American Indian, β4	-0.32	0.72	1.38	0.56	-0.58	0.56
Mixed Race, β5	-0.19	0.83	1.21	0.27	-0.70	0.49
Male, β6	0.02	1.02	0.98	0.12	0.20	0.84
Free/Reduced Lunch, β7	-0.03	0.97	1.03	0.16	-0.21	0.84
Met English Standard, β8	0.21	1.23	0.81	0.19	1.11	0.27
Met Social Studies Standard, β9	0.47	1.60	0.63	0.33	1.41	0.16
Met Science Standard, β10	0.55	1.74	0.57	0.21	2.60	0.01
Met Foreign Language Standard, β11	0.31	1.36	0.74	0.15	2.03	0.04
Met Fine Art Standard, β12	-0.25	0.78	1.28	0.32	-0.77	0.44
Math Level, β13	0.19	1.21	0.83	0.06	3.24	<.01
AP/IB, β14	0.40	1.49	0.67	0.14	2.88	<.01
Running Start, β15	0.37	1.44	0.69	0.15	2.44	0.01
GPA, β16	1.05	2.86	0.35	0.12	8.49	<.001

Evaluation Question #3: What variables predict CBS students who enroll and persist in college through their first year?

The next set of analysis also included NCS data on student persistence for 10,662 students. We categorized students as persistent if they attended college some time during the 2012-2013 school

year and returned to college in the fall of the 2013-2014 school year. Students were also defined as persistent if they attended college sometime during 2012-2013 and graduated from college before the start of the 2013-2014 school year (see Figure 9). It is important to note that students could potentially return to college sometime later this year. Consequently, the present analysis is a lower bound estimate of persistence for this cohort of students. The percentages could rise later in the school year as more students return to college. Our analysis showed that most students returned to college for their second year.

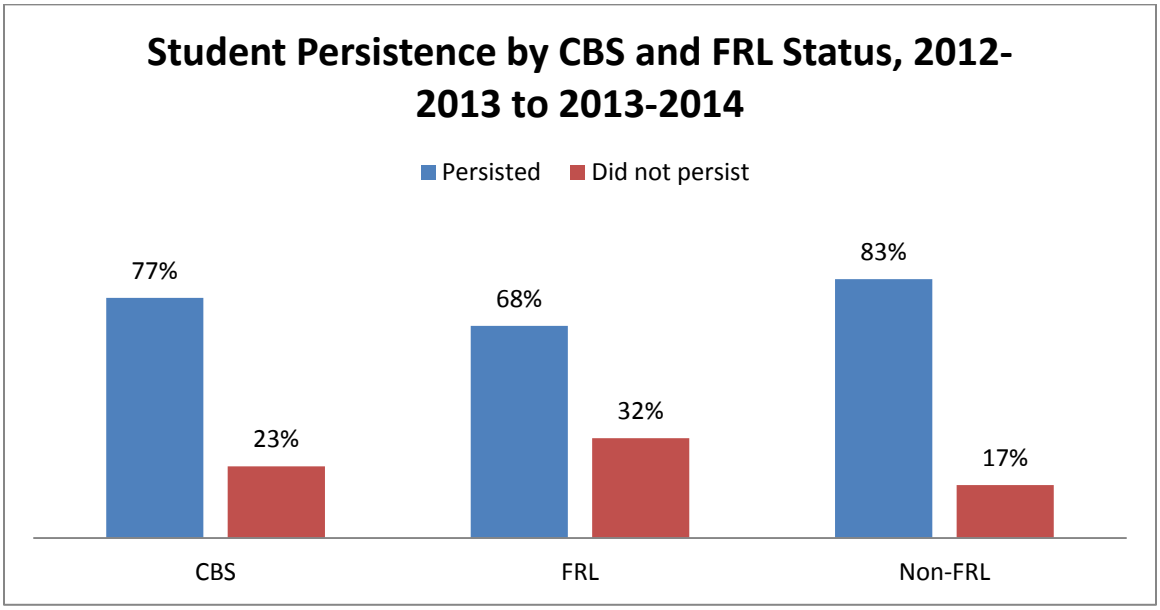

Figure 9. Student Persistence by Group, 2012-2013 to 2013-2014.

We used a GLMM to assess between group differences in college persistence, controlling for school and student level variables. The analysis showed that, controlling for all other variables in the model, CBS students had higher odds of persisting in college than either FRL or Non-FRL students (see Table 7). More specifically, CBS students' odds of persisting in college were more than two times (2.32) greater than the odds for FRL students. CBS students' odds of persisting in college were 1.26 times the odds for Non-FRL students.

As in the analyses for enrollment and first year completion, the persistence model showed that Navigation 101 was positively associated with the outcome. More specifically, students who attended schools with Navigation 101 programs had higher odds of persisting in college. These students' odds of persisting in college were 1.21 times greater than students who did not attend Navigation 101 high schools. On the other hand, AVID was negatively associated with college persistence. Students who attended schools with AVID programs had lower odds of persisting in college. These students' odds of persisting were 1.17 times less than students who did not attend AVID high schools. Of note, Navigation 101 is a program that is for all students, whereas AVID is an elective for some students. Only a small number of schools implement AVID school-wide. Similarly, we found ethnic differences in college persistence. Controlling for all other variables in the model, Black and Asian American students had higher odds of persisting in college than their White classmates. Black students' odds of college persistence were nearly two times (1.93) greater

than White students' odds. Similarly, Asian American students' odds of college persistence were 1.49 times greater than White students' odds.

We also found that our measures of high school preparation were also related to persistence. Students who met the social studies, science, and foreign language standards were more likely to persist in college. Students' odds of persisting in college increased by a factor of 2.07 if they completed the social studies standard; 1.41 times if they completed the science standard; and 1.49 if they completed the foreign language standard. Students' most advanced math course and GPA were also positively related to persistence. For each additional math course the odds of persisting in college increased by a factor of 1.26. Enrolling in one or more AP/IB courses in high schools increased the odds of persisting in college by a factor of 1.30. Lastly, GPA was positively related to college persistence. For each one unit change in GPA, the odds of persisting in college increased by a factor of 2.72. On the other hand, participation in the Running Start program was negatively related to persistence. Running start participation decreased students' odds of persisting by a factor of 1.36.

Table 7.
School-and Student-Level Predictors of College Persistence by CBS and FRL status

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	-6.24	0.00	511.32	0.87	-7.13	<.001
Total Enrollment, γ1	0.00	1.00	1.00	0.00	0.37	0.71
Percent of Teachers with Master's Degrees, γ2	0.00	1.00	1.00	0.00	-0.75	0.45
Average Teacher Experience, γ3	0.04	1.04	0.96	0.02	2.10	0.04
Teacher-Student Ratio, γ4	0.07	1.07	0.93	0.02	4.30	<.001
Percent Non-White, γ5	0.00	1.00	1.00	0.00	1.10	0.27
Percent Male, γ6	0.00	1.00	1.00	0.01	0.17	0.86
Percent Free/Reduced Lunch, γ7	-0.01	0.99	1.01	0.00	-1.78	0.08
Percent Technical Programs, γ8	0.02	1.02	0.98	0.22	0.11	0.92
Percent College Credit Programs, γ9	-0.03	0.97	1.03	0.27	-0.11	0.91
Navigation 101, γ10	0.19	1.21	0.83	0.08	2.33	0.02
AVID, γ11	-0.16	0.85	1.17	0.07	-2.22	0.03
Non-Free Lunch Student, β1	-0.23	0.79	1.26	0.08	-2.92	0.00
Free/Reduced Lunch, β2	-0.84	0.43	2.32	0.08	-9.90	< .001
Black, β3	0.66	1.93	0.52	0.11	6.24	0.00
Hispanic, β4	-0.06	0.94	1.06	0.09	-0.72	0.47
Asian/Pacific Islander, β5	0.40	1.49	0.67	0.08	4.87	0.00
American Indian, β6	-0.15	0.86	1.16	0.28	-0.55	0.58
Mixed Race, β7	-0.05	0.95	1.05	0.12	-0.39	0.70
Male, β8	-0.03	0.97	1.03	0.06	-0.59	0.56
Met English Standard, β9	0.10	1.11	0.90	0.09	1.18	0.24
Met Social Studies Standard, β10	0.73	2.07	0.48	0.14	5.29	< .001
Met Science Standard, β11	0.35	1.41	0.71	0.10	3.50	< .001
Met Foreign Language Standard, β12	0.40	1.49	0.67	0.07	5.51	< .001
Met Fine Art Standard, β13	0.12	1.13	0.89	0.13	0.89	0.38
Math Level, β14	0.20	1.22	0.82	0.03	7.63	< .001
AP/IB, β14	0.26	1.30	0.77	0.06	4.10	< .001
Running Start, β15	-0.31	0.74	1.36	0.07	-4.39	< .001
GPA, β16	1.00	2.72	0.37	0.06	17.50	< .001

We used another GLMM to assess these relationships among CBS students. The results were similar to our full model (see Table 8). More specifically, students who attended schools with Navigation 101 programs had higher odds of persisting in college. These students' odds of persisting in college were 1.36 times greater than students who did not attend Navigation 101 high

schools. AVID was negatively associated with college persistence. These students' odds of persisting were 1.36 times less than students who did not attend AVID high schools.

Similarly, we found ethnic differences in college persistence. Controlling for all other variables in the model, Black and Asian American students had higher odds of persisting in college than their White classmates. Black (1.92) and Asian American (1.87) students' odds of college persistence were also almost two times greater than White students' odds.

We also found that our measures of high school preparation were also related to persistence. Students who met the social studies standard were more likely to persist in college. These students' odds of persisting were more than two times (2.40) greater than students who did not complete the requirement. Students' most advanced math course and GPA were also positively related to persistence. For each additional math course the odds of persisting in college increased by a factor of 1.26. Enrolling in one or more AP/IB courses in high schools increased the odds of persisting in college by a factor of 1.44. Lastly, GPA was positively related to college persistence. For each one unit change in GPA, the odds of persisting in college increased by a factor of 2.49.

Table 8.
School-and Student-Level Predictors of College Persistence

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	-6.86	0.00	956.82	1.56	-4.39	<.001
Total Enrollment, γ1	0.00	1.00	1.00	0.00	0.97	0.33
Percent of Teachers with Master's Degrees, γ2	0.00	1.00	1.00	0.01	0.06	0.96
Average Teacher Experience, γ3	0.06	1.06	0.94	0.04	1.68	0.09
Teacher-Student Ratio, γ4	0.06	1.06	0.94	0.03	1.85	0.06
Percent Non-White, γ5	0.00	1.00	1.00	0.01	-0.10	0.92
Percent Male, γ6	0.00	1.00	1.00	0.02	0.18	0.86
Percent Free/Reduced Lunch, γ7	0.00	1.00	1.00	0.01	-0.28	0.78
Percent Technical Programs, γ8	-0.50	0.61	1.65	0.35	-1.42	0.16
Percent College Credit Programs, γ9	-0.41	0.67	1.50	0.46	-0.89	0.38
Navigation 101, γ10	0.31	1.36	0.73	0.16	1.97	0.05
AVID, γ11	-0.31	0.73	1.36	0.14	-2.19	0.03
Black, β1	0.65	1.92	0.52	0.20	3.26	<.01
Hispanic, β2	0.16	1.17	0.85	0.18	0.90	0.37
Asian/Pacific Islander, β3	0.63	1.87	0.53	0.18	3.45	<.001
American Indian, β4	-0.44	0.64	1.56	0.55	-0.81	0.42
Mixed Race, β5	0.01	1.01	0.99	0.26	0.05	0.96
Male, β6	-0.03	0.97	1.03	0.12	-0.27	0.79
Free/Reduced Lunch, β7	0.00	1.00	1.00	0.16	0.01	0.99
Met English Standard, β8	0.03	1.03	0.97	0.18	0.18	0.86
Met Social Science Standard, β9	0.88	2.40	0.42	0.33	2.63	0.01
Met Science Standard, β10	0.38	1.46	0.69	0.20	1.91	0.06
Met Foreign Language Standard, β11	0.19	1.21	0.82	0.15	1.32	0.19
Met Fine Art Standard, β12	-0.06	0.94	1.06	0.31	-0.20	0.85
Math Level, β13	0.23	1.26	0.79	0.06	3.94	<.001
AP/IB, β14	0.11	1.12	0.89	0.14	0.82	0.41
Running Start, β15	0.37	1.44	0.69	0.15	2.40	0.02
GPA, β16	0.91	2.49	0.40	0.12	7.55	<.001

Evaluation Question #4: Which college readiness indicators when combined with the CBS were most predictive of college enrollment/persistence

We first examined college readiness for three groups of students, students who did not qualify for free/reduced lunch and who also did not qualify for CBS; students who received free/reduced lunch that did not enroll for CBS; and, finally, CBS students. Figure 10 shows the percentage of

students who met Washington state college admissions standards for English, math, social studies, science, foreign language, and arts. The figure also shows the percentage of students from all three groups who completed all of the college admissions standards. The analysis indicated that students who received free/reduced lunch group were less likely to meet college admissions standards than the other two groups.

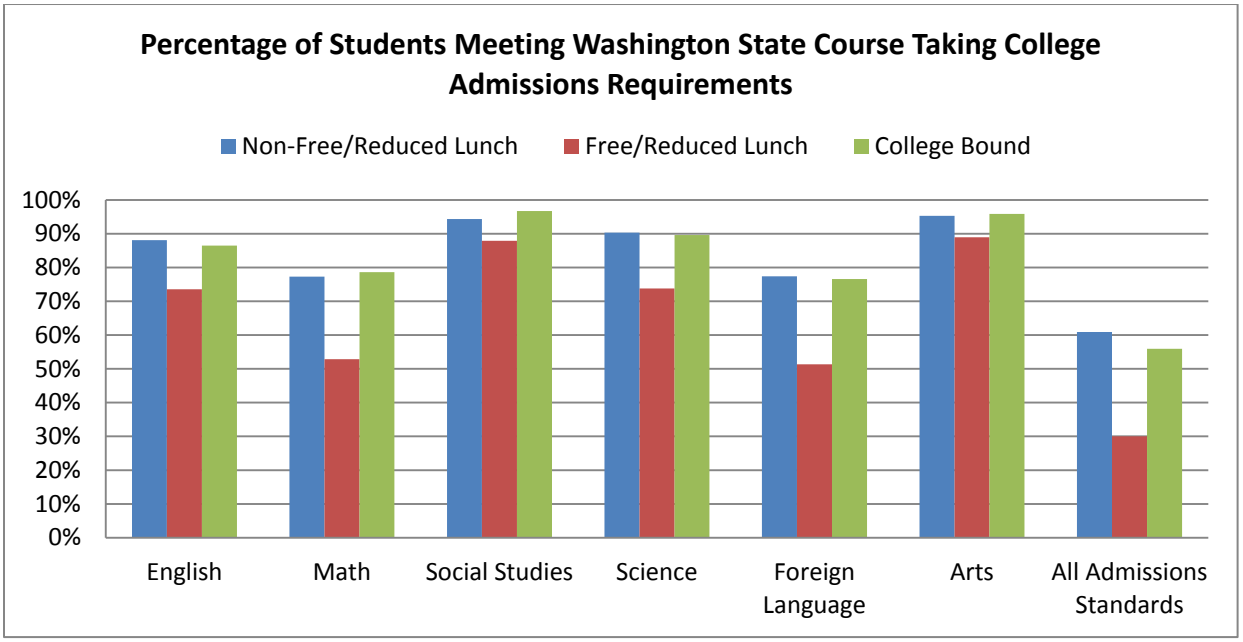

Figure 10. Percentage of Students Meeting Washington State Course Taking College Admissions Requirements

We performed a series of GLMMs to test for between-group differences, controlling for school-and student-level demographics for a sample of 8,681 students. CBS students were the reference group for these analyses. We inverted the odds ratios for negative coefficients for ease of interpretation. These models showed that CBS scholars had higher odds of completing college admissions requirements than their classmates who received free/ reduced priced lunch (see Tables 9 to 15). Their odds of completing the English requirements were 2.19 times higher than the odds for their classmates on free-reduced lunch. Similarly, their odds were 3.23 times greater in math, 2.57 times greater in social studies, 2.76 times greater in science, 2.70 times greater in foreign language, 2.35 times greater in fine arts, and 2.65 times greater across all admissions requirements.

In most instances, CBS scholars' odds of completing college requirements were similar to the odds for students who were not receiving free/reduced price lunch. In two instances, CBS scholars' odds of completing admissions requirements exceeded the odds for students who did not receive free/reduced lunch. CBS students' odds of completing math requirements were 1.24 times greater than students who did not receive free or reduced lunch. In other words, CBS scholars' odds of completing math requirements were 24% higher than students who did not receive free or reduced lunch. Their odds of completing the all of the Washington state requirements were 1.15 times those of non-free/reduced lunch students' odds. In other words, College Bound Scholars' odds of

completing Washington state requirements were 15% higher than students who did not receive free or reduced lunch.

Table 9.
School-and Student-Level Predictors of Completion the English Course Taking Requirement

Variable	*Coefficient*	*Odds Ratio*	*1/Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	3.53	34.27	0.03	1.94	1.82	0.07
Total Enrollment, γ1	0.00	1.00	1.00	0.00	0.55	0.58
Percent of Teachers with Master's Degrees, γ2	-0.01	0.99	1.01	0.01	-0.48	0.63
Average Teacher Experience, γ3	-0.05	0.95	1.06	0.06	-0.97	0.33
Teacher-Student Ratio, γ4	0.01	1.01	0.99	0.05	0.22	0.82
Percent Non-White, γ5	-0.01	0.99	1.01	0.01	-0.93	0.35
Percent Male, γ6	-0.02	0.98	1.02	0.02	-0.84	0.40
Percent Free/Reduced Lunch, γ7	0.01	1.01	0.99	0.01	0.50	0.62
Percent Technical Programs, γ8	0.15	1.16	0.86	0.56	0.27	0.79
Percent College Credit Programs, γ9	1.40	4.07	0.25	1.03	1.36	0.17
Navigation 101, γ10	0.03	1.03	0.97	0.30	0.11	0.91
AVID, γ11	-0.22	0.80	1.25	0.28	-0.79	0.43
Non-Free Lunch Student, β1	0.12	1.13	0.88	0.10	1.26	0.21
Free/Reduced Lunch, β2	-0.78	0.46	2.19	0.09	-8.44	< .001
Black, β3	-0.09	0.92	1.09	0.11	-0.78	0.43
Hispanic, β4	-0.14	0.87	1.15	0.09	-1.46	0.14
Asian/Pacific Islander, β5	0.20	1.23	0.82	0.10	2.11	0.04
American Indian, β6	-0.02	0.98	1.02	0.30	-0.08	0.94
Mixed Race, β7	0.15	1.16	0.86	0.16	0.90	0.37
Male, β8	-0.34	0.71	1.40	0.06	-5.47	< .001

Table 10.
School-and Student-Level Predictors of Completion of the Math Course Taking Requirement

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	2.51	12.26	0.08	2.21	1.13	0.26
Total Enrollment, γ1	0.00	1.00	1.00	0.00	-0.39	0.69
Percent of Teachers with Master's Degrees, γ2	0.00	1.00	1.00	0.02	-0.07	0.94
Average Teacher Experience, γ3	-0.16	0.85	1.17	0.07	-2.40	0.02
Teacher-Student Ratio, γ4	0.02	1.02	0.98	0.06	0.42	0.67
Percent Non-White, γ5	0.01	1.01	0.99	0.01	1.14	0.25
Percent Male, γ6	0.01	1.01	0.99	0.03	0.48	0.63
Percent Free/Reduced Lunch, γ7	-0.03	0.97	1.03	0.01	-1.87	0.06
Percent Technical Programs, γ8	0.59	1.81	0.55	0.65	0.91	0.36
Percent College Credit Programs, γ9	0.53	1.70	0.59	1.21	0.44	0.66
Navigation 101, γ10	0.23	1.26	0.79	0.35	0.67	0.50
AVID, γ11	0.72	2.06	0.49	0.33	2.17	0.03
Non-Free Lunch Student, β1	-0.21	0.81	1.24	0.09	-2.50	0.01
Free/Reduced Lunch, β2	-1.17	0.31	3.23	0.08	-14.22	<.001
Black, β3	-0.67	0.51	1.95	0.09	-7.25	<.001
Hispanic, β4	-0.47	0.63	1.60	0.08	-5.72	<.001
Asian/Pacific Islander, β5	0.62	1.86	0.54	0.09	7.06	<.001
American Indian, β6	-0.49	0.61	1.63	0.23	-2.12	0.03
Mixed Race, β7	-0.14	0.87	1.15	0.13	-1.11	0.27
Male, β8	-0.17	0.85	1.18	0.05	-3.14	<.01

Table11.

School-and Student-Level Predictors of Completion of the Social Studies Course Taking Requirement

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	0.86	2.36	0.42	2.67	0.32	0.75
Total Enrollment, γ1	0.00	1.00	1.00	0.00	0.25	0.80
Percent of Teachers with Master's Degrees, γ2	0.01	1.01	0.99	0.02	0.31	0.76
Average Teacher Experience, γ3	-0.03	0.97	1.03	0.07	-0.46	0.65
Teacher-Student Ratio, γ4	-0.02	0.98	1.02	0.06	-0.37	0.71
Percent Non-White, γ5	0.03	1.03	0.97	0.01	2.84	<.001
Percent Male, γ6	0.05	1.06	0.95	0.03	1.54	0.12
Percent Free/Reduced Lunch, γ7	-0.04	0.96	1.04	0.02	-2.26	0.02
Percent Technical Programs, γ8	-0.93	0.40	2.53	0.73	-1.27	0.21
Percent College Credit Programs, γ9	0.94	2.55	0.39	1.32	0.71	0.48
Navigation 101, γ10	0.41	1.51	0.66	0.38	1.09	0.28
AVID, γ11	0.53	1.69	0.59	0.36	1.45	0.15
Non-Free Lunch Student, β1	-0.15	0.86	1.17	0.16	-0.96	0.34
Free/Reduced Lunch, β2	-0.94	0.39	2.57	0.15	-6.28	<.001
Black, β3	-0.09	0.92	1.09	0.16	-0.56	0.58
Hispanic, β4	-0.13	0.87	1.14	0.13	-1.01	0.31
Asian/Pacific Islander, β5	0.59	1.80	0.56	0.15	3.80	<.001
American Indian, β6	-0.20	0.82	1.22	0.40	-0.50	0.61
Mixed Race, β7	0.15	1.17	0.86	0.22	0.69	0.49
Male, β8	-0.54	0.58	1.71	0.09	-5.94	<.001

Table 12.
School-and Student-Level Predictors of Completion of the Science Course Taking Requirement

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	2.96	19.38	0.05	1.89	1.57	0.12
Total Enrollment, γ1	0.00	1.00	1.00	0.00	0.07	0.95
Percent of Teachers with Master's Degrees, γ2	0.00	1.00	1.00	0.01	-0.17	0.87
Average Teacher Experience, γ3	-0.17	0.84	1.19	0.06	-2.97	<.01
Teacher-Student Ratio, γ4	-0.02	0.98	1.02	0.05	-0.32	0.75
Percent Non-White, γ5	0.01	1.01	0.99	0.01	1.52	0.13
Percent Male, γ6	0.04	1.04	0.97	0.02	1.53	0.13
Percent Free/Reduced Lunch, γ7	-0.03	0.97	1.03	0.01	-2.72	0.01
Percent Technical Programs, γ8	0.53	1.69	0.59	0.57	0.93	0.35
Percent College Credit Programs, γ9	2.06	7.88	0.13	1.05	1.96	0.05
Navigation 101, γ10	0.03	1.03	0.97	0.30	0.11	0.91
AVID, γ11	0.67	1.95	0.51	0.28	2.41	0.02
Non-Free Lunch Student, β1	0.02	1.02	0.98	0.11	0.16	0.87
Free/Reduced Lunch, β2	-1.02	0.36	2.76	0.10	-10.52	<.001
Black, β3	-0.21	0.81	1.24	0.12	-1.84	0.07
Hispanic, β4	-0.26	0.77	1.30	0.10	-2.63	0.01
Asian/Pacific Islander, β5	0.36	1.43	0.70	0.11	3.36	<.001
American Indian, β6	-0.86	0.42	2.35	0.26	-3.33	<.001
Mixed Race, β7	0.01	1.01	0.99	0.16	0.06	0.95
Male, β8	-0.41	0.66	1.51	0.07	-6.26	<.001

Table 13.
School-and Student-Level Predictors of Completion of the Foreign Language Course Taking Requirement

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	-1.27	0.28	3.55	1.49	-0.85	0.40
Total Enrollment, γ1	0.00	1.00	1.00	0.00	0.09	0.93
Percent of Teachers with Master's Degrees, γ2	0.01	1.01	0.99	0.01	0.53	0.60
Average Teacher Experience, γ3	-0.10	0.90	1.11	0.04	-2.35	0.02
Teacher-Student Ratio, γ4	0.09	1.09	0.92	0.04	2.39	0.02
Percent Non-White, γ5	0.01	1.01	0.99	0.01	1.30	0.19
Percent Male, γ6	0.03	1.03	0.97	0.02	1.41	0.16
Percent Free/Reduced Lunch, γ7	-0.01	0.99	1.01	0.01	-1.54	0.12
Percent Technical Programs, γ8	0.23	1.25	0.80	0.43	0.53	0.60
Percent College Credit Programs, γ9	1.45	4.28	0.23	0.75	1.94	0.05
Navigation 101, γ10	0.17	1.19	0.84	0.22	0.79	0.43
AVID, γ11	0.36	1.44	0.70	0.20	1.78	0.07
Non-Free Lunch Student, β1	0.13	1.14	0.88	0.08	1.61	0.11
Free/Reduced Lunch, β2	-0.99	0.37	2.70	0.08	-12.99	< .001
Black, β3	-0.34	0.71	1.40	0.09	-3.71	< .001
Hispanic, β4	-0.05	0.95	1.05	0.08	-0.61	0.54
Asian/Pacific Islander, β5	0.30	1.35	0.74	0.08	3.74	< .001
American Indian, β6	0.00	1.00	1.00	0.24	-0.01	0.99
Mixed Race, β7	0.21	1.24	0.81	0.13	1.64	0.10
Male, β8	-0.66	0.52	1.93	0.05	-12.66	< .001

Table 14.
School-and Student-Level Predictors of Completion of the Fine Arts Course Taking Requirement

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	3.31	27.42	0.04	1.90	1.74	0.08
Total Enrollment, γ1	0.00	1.00	1.00	0.00	0.34	0.74
Percent of Teachers with Master's Degrees, γ2	-0.02	0.98	1.02	0.01	-1.63	0.10
Average Teacher Experience, γ3	-0.05	0.95	1.05	0.05	-1.01	0.31
Teacher-Student Ratio, γ4	0.07	1.08	0.93	0.05	1.59	0.11
Percent Non-White, γ5	-0.01	0.99	1.01	0.01	-1.13	0.26
Percent Male, γ6	0.00	1.00	1.00	0.02	0.01	1.00
Percent Free/Reduced Lunch, γ7	0.01	1.01	0.99	0.01	1.28	0.20
Percent Technical Programs, γ8	-0.10	0.90	1.11	0.54	-0.19	0.85
Percent College Credit Programs, γ9	1.41	4.11	0.24	0.92	1.54	0.12
Navigation 101, γ10	0.16	1.17	0.85	0.26	0.61	0.54
AVID, γ11	0.30	1.35	0.74	0.25	1.23	0.22
Non-Free Lunch Student, β1	-0.01	0.99	1.01	0.16	-0.06	0.95
Free/Reduced Lunch, β2	-0.85	0.43	2.35	0.15	-5.84	<.001
Black, β3	-0.45	0.64	1.56	0.15	-3.08	<.01
Hispanic, β4	0.16	1.17	0.85	0.15	1.07	0.29
Asian/Pacific Islander, β5	0.33	1.39	0.72	0.15	2.23	0.03
American Indian, β6	0.43	1.54	0.65	0.51	0.84	0.40
Mixed Race, β7	0.09	1.09	0.91	0.25	0.36	0.72
Male, β8	-0.61	0.54	1.84	0.10	-6.37	<.001

Table 15.
School-and Student-Level Predictors of Completion of All Course Taking Requirements

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	0.44	1.56	0.64	1.97	0.22	0.82
Total Enrollment, γ1	0.00	1.00	1.00	0.00	1.10	0.27
Percent of Teachers with Master's Degrees, γ2	0.00	1.00	1.00	0.01	0.19	0.85
Average Teacher Experience, γ3	-0.17	0.85	1.18	0.06	-2.85	<.01
Teacher-Student Ratio, γ4	0.03	1.03	0.97	0.05	0.69	0.49
Percent Non-White, γ5	0.00	1.00	1.00	0.01	0.43	0.67
Percent Male, γ6	0.01	1.01	0.99	0.03	0.42	0.68
Percent Free/Reduced Lunch, γ7	-0.01	0.99	1.01	0.01	-1.18	0.24
Percent Technical Programs, γ8	0.27	1.31	0.77	0.56	0.47	0.64
Percent College Credit Programs, γ9	0.49	1.63	0.61	0.97	0.50	0.62
Navigation 101, γ10	0.13	1.14	0.88	0.29	0.45	0.65
AVID, γ11	0.57	1.76	0.57	0.27	2.10	0.04
Non-Free Lunch Student, β1	0.14	1.15	0.87	0.07	2.04	0.04
Free/Reduced Lunch, β2	-0.97	0.38	2.65	0.07	-13.36	<.001
Black, β3	-0.47	0.63	1.59	0.09	-5.27	<.001
Hispanic, β4	-0.33	0.72	1.39	0.08	-4.24	<.001
Asian/Pacific Islander, β5	0.31	1.37	0.73	0.07	4.34	<.001
American Indian, β6	-0.32	0.72	1.38	0.23	-1.39	0.16
Mixed Race, β7	0.04	1.04	0.96	0.11	0.39	0.70
Male, β8	-0.49	0.61	1.64	0.05	-10.30	< .001

Next, we examined college enrollment for three groups of students, students who did not qualify for free/reduced lunch and who also did not qualify for CBS; students who received free/reduced lunch that did not enroll for CBS; and finally, CBS students. Figure 11 shows the percentage of students who went to college the first year after graduating from high school. The analysis indicated that students who received free/reduced lunch group were less likely to attend college than the other two groups.

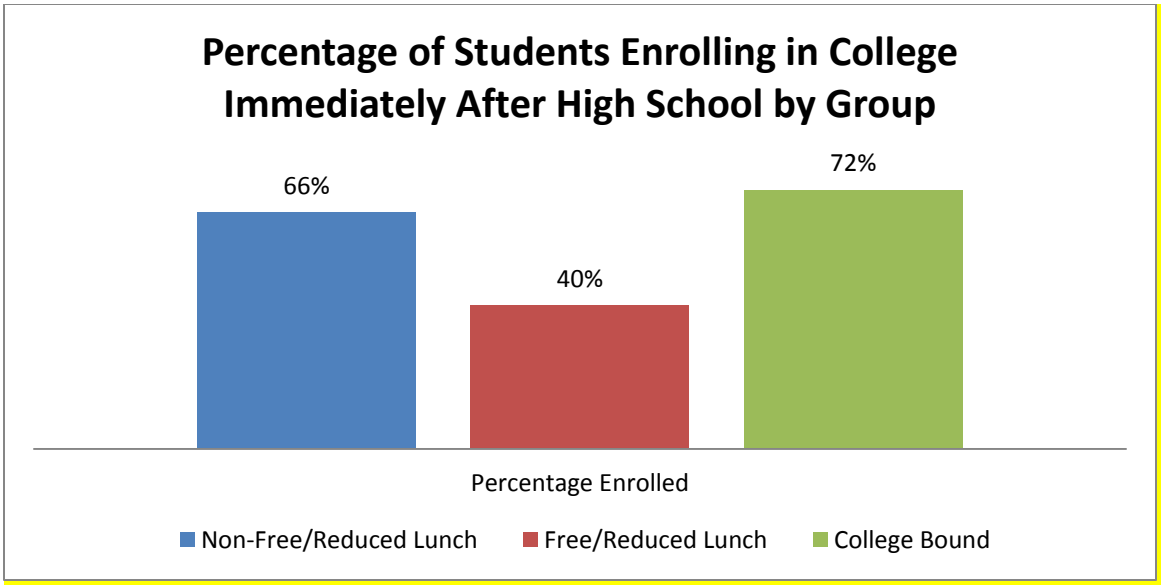

Figure 11. **Percentage of Students Enrolling in College Immediately After High School by Group**

The next GLMM examined the relationship between college readiness indicators and college enrollment in a sample of 8,681 students. The model also examined the relationship between recipients of the College Bound Scholarship and enrollment. The model (see Table 16) showed that, controlling for all other variables, College Bound scholars were more likely to enroll in college than students who received free or reduced lunch and students who did not receive free lunch. College Bound scholars' odds of enrolling in college 2.19 times the odds for free lunch students and 1.22 times the odds for non-free lunch students. The model also showed that students who met college admissions requirements were more likely to enroll in college than students who did not meet the requirements. The odds of enrolling in college increased by a factor of 1.22 for students who met the English requirement; 1.49 for students completing math; 2.36 for students completing social studies requirements; 1.55 for students completing science requirements; and 1.66 for students completing foreign language. Finally, students with higher GPAs were also more likely to attend college. Each point of GPA increased students' odds of attending college by a factor of 3.23.

Table 16.
School- and Student-Level Predictors of College Enrollment.

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	-6.67	0.00	790.76	0.88	-7.58	<.001
Total Enrollment, γ1	0.00	1.00	1.00	0.00	0.69	0.49
Percent of Teachers with Master's Degrees, γ2	-0.01	0.99	1.01	0.01	-1.41	0.16
Average Teacher Experience, γ3	0.02	1.02	0.98	0.02	1.05	0.29
Teacher-Student Ratio, γ4	0.08	1.08	0.93	0.02	4.25	<.001
Percent Non-White, γ5	0.00	1.00	1.00	0.00	0.81	0.42
Percent Male, γ6	0.00	1.00	1.00	0.01	0.06	0.95
Percent Free/Reduced Lunch, γ7	0.00	1.00	1.00	0.00	-1.26	0.21
Percent Technical Programs, γ8	-0.01	0.99	1.01	0.23	-0.07	0.95
Percent College Credit Programs, γ9	0.08	1.09	0.92	0.29	0.29	0.77
Navigation 101, γ10	0.11	1.11	0.90	0.09	1.19	0.23
AVID, γ11	-0.18	0.83	1.20	0.08	-2.34	0.02
Non-Free Lunch Student, β1	-0.20	0.82	1.22	0.07	-2.66	0.01
Free/Reduced Lunch, β2	-0.78	0.46	2.19	0.08	-9.98	<.001
Black, β3	0.59	1.81	0.55	0.09	6.30	<.001
Hispanic, β4	-0.06	0.94	1.07	0.08	-0.76	0.45
Asian/Pacific Islander, β5	0.37	1.44	0.69	0.08	4.84	<.001
American Indian, β6	-0.13	0.88	1.13	0.26	-0.48	0.63
Mixed Race, β7	-0.01	0.99	1.01	0.12	-0.09	0.93
Male, β8	0.02	1.02	0.98	0.05	0.33	0.74
Met English Standard, β9	0.20	1.22	0.82	0.08	2.52	0.01
Met Math Standard, β10	0.40	1.49	0.67	0.07	5.63	<.001
Met Social Science Standard, β11	0.86	2.36	0.42	0.13	6.51	<.001
Met Science Standard, β12	0.44	1.55	0.65	0.09	4.68	<.001
Met Foreign Language Standard, β13	0.51	1.66	0.60	0.07	7.55	<.001
Met Fine Art Standard, β14	0.12	1.13	0.89	0.12	0.97	0.33
GPA, β15	1.17	3.23	0.31	0.05	23.03	< .001

Evaluation Question #5: To what extent has the CBS program shown an impact on college enrollment rates in Washington State?

The percentage of Washington State high school graduates enrolling in college anytime during the first year after graduating from high school (College Direct) is displayed in Figure 12. The percentage of College Direct students increased by about half a percentage-point from 2011 to

2012. A chi-square analysis revealed that this difference was not statistically significant. Figure 13 displays the percentage of College Direct students who attend 2-year compared to 4-year colleges. The percentage of College Direct students attending 4-year colleges increased in 2012 to its highest point and surpassed the percentage of College Direct students attending 2-year colleges. A chi-square analysis revealed a statistically significant difference between 2011 and 2012 in the percentage of College Direct students attending 4-year colleges (Pearson Chi-Square = 141.47, $p < .001$).

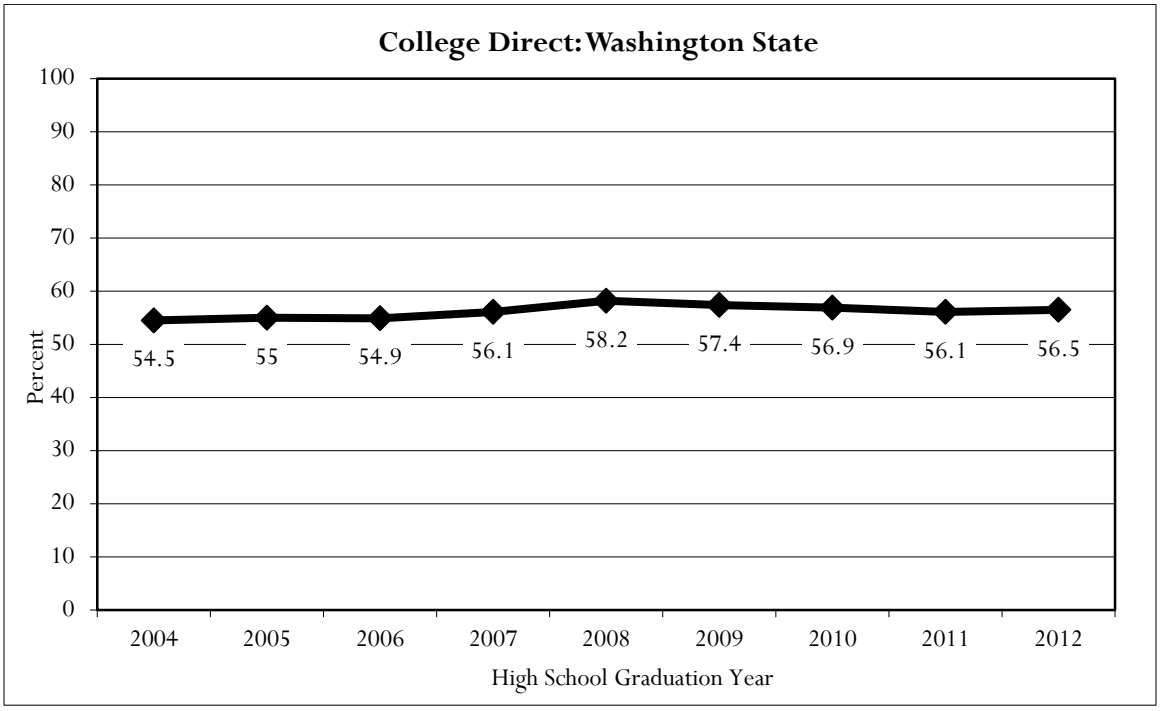

Figure 12. **College Direct – Washington State**

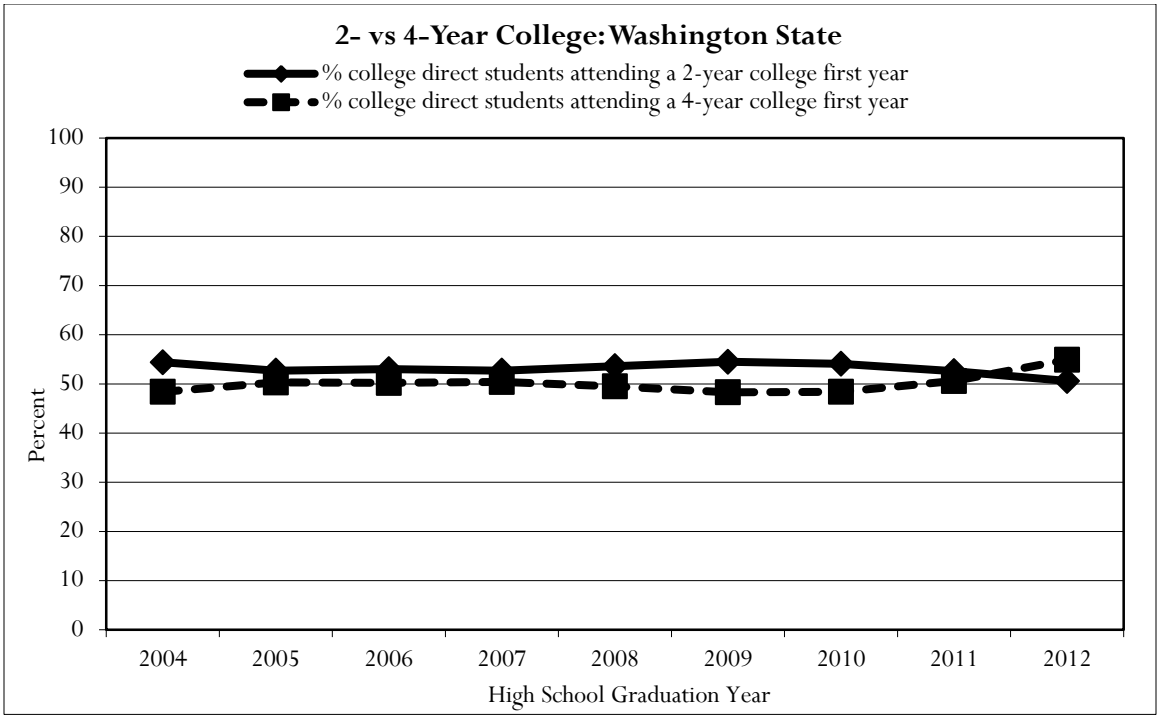

Figure 13. **College Direct by 2- or 4-year College - Washington State**

Evaluation Question #6: To what extent do CBS student demographics impact outcomes?

We examined this question using three different types of analysis. First, using school-level data from WSAC and OSPI, we examined the relationships between demographic variables and four outcomes, graduation rate, college attendance rate, CBS rate, and composite rate, in a sample of 638 Washington high schools (see *Data Sources* section for analysis description). Second, using data from the Navigation 101 survey of 24 College Readiness Initiative Schools, we examined the relationship between teacher and student perceptions of school climate and CBS student outcomes. Third, using both school-and student-level data, we examined the relationship between school and student level demographics and two outcomes, college enrollment and postsecondary path (i.e., the choice to attend a two-year or four-year institution) in a sample of 1,857 students.

We used a series of Ordinary Least Squares regression models to assess the relationship between school-level demographics and CBS student outcomes. The predictor variables included measures of school size, demographics, and teacher quality. Total enrollment, percent non-White, percent male, and student-teacher ratio were all significant predictors of graduation rate (see Table 17). Total enrollment was positively associated with graduation rate such that schools with higher enrollments were likely to have higher graduation rates for CBS students. The percentages of students enrolled in technical and college credit programs were also positively related to graduation rate. Schools with a higher percentage of students enrolled in technical and college credit programs had higher graduation rates for CBS students. On the other hand, the percentages of male and non-White students were negatively related to high school graduation. Schools with a higher percentage of males and those with higher percentages of non-White students had lower graduation rates for CBS students. Similarly, high schools with higher student-teacher ratios had lower graduation rates.

The results were similar for the other three outcomes – college, CBS, and composite rate (see Tables 18 through 20). Total enrollment and the percentage of students enrolled in college credit programs were positive predictors of all three outcomes. In other words, schools with higher enrollments and schools with higher percentages of students enrolled in college credit courses tended to have higher levels of college attendance, use of the CB scholarship, and overall results. The percentage of male students, the percentage of non-White students, and the student teacher ratio emerged as negative predictors of most of the outcomes. Schools with a higher percentage of male students tended to have lower college, CBS, and composite rates. Similarly, higher teacher-student ratios were associated with lower college, CBS, and composite rates. The percentage of non-White students was negatively related to college and composite rates, but was unrelated to the CBS rate.

Table 17.
The relationship between school demographic variables and CBS student graduation rate

Variable	*B*	SE	β	*t*	*p*
Intercept	0.95	0.12		8.01	<.001
Total Enrollment	0.00	0.00	0.25	5.19	<.001
Percent Non-White	0.00	0.00	-0.15	-2.89	<.01
Percent Male	-0.01	0.00	-0.14	-3.48	<.001
Percent Free/Reduced Lunch	0.00	0.00	0.00	0.18	0.86
Student-Teacher Ratio	-0.01	0.00	-0.15	-3.52	<.001
Average Teacher Years of Experience	-0.01	0.00	-0.06	-1.46	0.15
Percent Teachers with Master's Degree	0.00	0.00	-0.07	-1.47	0.14
AVID	0.12	0.07	0.07	1.64	0.10
Navigation 101	0.08	0.08	0.04	0.97	0.33
Percent Technical Programs	0.23	0.06	0.17	4.00	<.001
Percent College Credit Programs	0.12	0.04	0.15	2.94	<.01

$R^2 = 0.21$, $F(11, 537) = 13.13$, $p < .001$.

Table 18.

The relationship between school demographic variables and CBS student college attendance rate

Variable	*B*	SE	β	*t*	*p*
Intercept	0.54	0.54		6.80	<.001
Total Enrollment	0.00	0.00	0.26	5.29	<.001
Percent Non-White	0.00	0.00	-0.13	-2.46	0.01
Percent Male	0.00	0.00	-0.13	-3.06	<.01
Percent Free/Reduced Lunch	0.00	0.00	0.01	0.09	0.92
Student-Teacher Ratio	0.00	0.00	-0.11	-2.46	0.01
Average Teacher Years of Experience	0.00	0.00	-0.08	-1.92	0.06
Percent Teachers with Master's Degree	0.00	0.00	-0.08	-1.54	0.12
AVID	0.01	0.01	0.01	0.11	0.91
Navigation 101	0.07	0.07	0.06	1.33	0.19
Percent Technical Programs	0.07	0.07	0.08	1.85	0.07
Percent College Credit Programs	0.06	0.06	0.12	2.28	0.02

$R^2 = 0.15$, F (11, 537) = 8.80, $p < .001$.

Table 19.

The relationship between school demographic variables and CBS rate

Variable	*B*	SE	β	*t*	*p*
Intercept	0.48	0.07		6.64	<.001
Total Enrollment	0.00	0.00	0.25	5.00	<.001
Percent Non-White	0.00	0.00	-0.07	-1.38	0.17
Percent Male	0.00	0.00	-0.13	-3.04	<.01
Percent Free/Reduced Lunch	0.00	0.00	-0.05	-0.89	0.38
Student-Teacher Ratio	0.00	0.00	-0.12	-2.56	0.01
Average Teacher Years of Experience	0.00	0.00	-0.06	-1.59	0.11
Percent Teachers with Master's Degree	0.00	0.00	-0.09	-1.88	0.06
AVID	0.00	0.04	0.00	0.00	1.00
Navigation 101	0.05	0.05	0.1	1.14	0.26
Percent Technical Programs	0.07	0.04	0.08	1.86	0.06
Percent College Credit Programs	0.06	0.03	0.13	2.52	0.01

$R^2 = 0.15$, F (11, 537) = 8.73, $p < .001$.

Table 20.
The Relationship between School Demographic Variables and Composite Rate

Variable	*B*	SE	β	*t*	*p*
Intercept	0.66	0.08		8.36	<.001
Total Enrollment	0.00	0.00	0.28	5.93	<.001
Percent Non-White	0.00	0.00	-0.14	-2.71	<.01
Percent Male	0.00	0.00	-0.15	-3.72	<.001
Percent Free/Reduced Lunch	0.00	0.00	-0.01	-0.15	0.88
Student-Teacher Ratio	0.00	0.00	-0.15	-3.39	<.001
Average Teacher Years of Experience	0.00	0.00	-0.07	-1.87	0.06
Percent Teachers with Master's Degree	0.00	0.00	-0.09	-1.84	0.07
AVID	0.04	0.05	0.04	0.87	0.39
Navigation 101	0.07	0.05	0.1	1.28	0.20
Percent Technical Programs	0.12	0.04	0.14	3.21	<.001
Percent College Credit Programs	0.08	0.03	0.15	3.02	<.001

$R^2 = 0.20$, $F(11, 537) = 13.69$, $p < .001$.

We used Pearson product moment correlations to assess the relationships between responses to the Students Perspectives Questionnaire and CBS student outcomes (Table 21). We found that teachers' attitudes and beliefs about school personalization (i.e., the extent to which the school facilitates relationships between students and staff) were negatively related to the composite rate. We found several significant correlations between students' average responses to the Student Perspectives Questionnaire and CBS students' outcomes. The *High Expectations* factor, which assesses the extent to which students believe that teachers at the school are invested in educational success for all students, was positively related to both the CBS rate and the college attendance rate. The *Performance Assessment* factor, which probes the number of times that teachers gave assignments that allow students to show what they have learned, was positively related to the graduation rate and the composite rate. The *Satisfaction I* factor, which assesses the extent to which students are pleased with their academic preparation, was positively related to graduation rate. *Sense of Belonging,* which measures the extent to which the student feels like a member of the school community, was positively related to graduation and composite rate. Finally, *Future Focus,* which evaluates the extent to which the high school has adequately prepared the students' for college and career, was also positively related to both graduation rate and composite rate.

Table 21.
The Relationship Between Student Perspectives Questionnaire Responses and Student Outcomes

	CBS Student Outcome			
NAV 101 Survey Response	Graduation	CBS	College	Composite
Teacher				
Quality of Education	-0.15	-0.19	-0.12	-0.18
Partnerships Factor	0.06	0.10	0.14	0.11
Standards Based Teaching	-0.35	-0.27	-0.25	-0.35
Personalization	-0.39	-0.33	-0.34	-0.41*
Environment	-0.12	-0.06	-0.05	-0.10
Future Focus	-0.22	-0.38	-0.33	-0.35
Technology	-0.06	-0.05	-0.02	-0.05
Constructivist Teaching	-0.33	-0.06	-0.07	-0.20
Student				
High Expectations	0.10	-0.41*	-0.45*	-0.24
Personalized	0.14	-0.17	-0.21	-0.06
Active Inquiry	0.15	-0.12	-0.18	-0.03
In-depth Learning	0.09	0.12	-0.01	0.08
Performance Assessment	0.64**	0.16	0.13	0.41*
Satisfaction 1	0.71**	0.06	0.05	0.38
Satisfaction 2	0.23	-0.26	-0.26	-0.06
Sense of Belonging	0.86**	0.38	0.37	0.67**
Future Focus	0.56**	0.25	0.23	0.43*

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

We used two GLMMs to examine relationships between school-and student-level demographic predictors of college enrollment and post-secondary path among CBS students. These analyses used school-level data from WSAC and OSPI matched with student -level data from Road Map and CRI districts. The sample for this analysis included 57 schools and 1857 students. The school-level predictors were the same as those used in the OLS analysis. The student-level demographic predictors included student ethnicity, gender, and free/reduced lunch status. White students and girls were the reference categories. In the first model, predicting college enrollment, we did not find a significant relationship between any of the school-level demographic variables and the outcome (Table 22).

However, we did find some student-level predictors of college enrollment. Controlling for differences in school and student demographics, Black and Asian/Pacific Islander students were more likely to enroll in college than their White classmates. Black students' odds of enrolling in college directly after college were 43% higher than White students' odds, controlling for the other variables in the model. Similarly, Asian/Pacific Islander students' odds were 54% greater than

White students' odds. The next model predicted CBS students' entrance into either a two- or four-year postsecondary institution (Table 23). Asian/Pacific Islander students were more likely to enroll in four-year colleges than their White classmates. Asian students' odds of enrolling in a four-year college as opposed to a two-year college were 47% greater than White students' odds.

Table 22.
School-and student-level predictors of CBS student college enrollment.

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	0.52	1.68	0.60	1.25	0.41	0.68
Total Enrollment, γ1	0.00	1.00	1.00	0.00	1.78	0.08
Percent of Teachers with Master's Degrees, γ2	0.01	1.01	0.99	0.01	0.62	0.54
Average Teacher Experience, γ3	0.03	1.03	0.97	0.03	0.89	0.37
Teacher-Student Ratio, γ4	0.02	1.02	0.98	0.03	0.73	0.47
Percent Non-White, γ5	0.00	1.00	1.00	0.00	-0.82	0.41
Percent Male, γ6	-0.01	0.99	1.01	0.01	-0.42	0.68
Percent Free/Reduced Lunch, γ7	0.00	1.00	1.00	0.01	-0.62	0.53
Percent Technical Programs, γ8	0.07	1.07	0.94	0.30	0.22	0.83
Percent College Credit Programs, γ9	-0.26	0.77	1.30	0.42	-0.61	0.54
Navigation 101, γ10	0.03	1.03	0.97	0.14	0.22	0.82
AVID, γ11	-0.25	0.78	1.28	0.13	-1.91	0.06
Black, β1	0.36	1.43	0.70	0.19	1.94	0.05
Hispanic, β2	-0.12	0.89	1.12	0.17	-0.71	0.48
Asian/Pacific Islander, β3	0.43	1.54	0.65	0.17	2.51	0.01
American Indian, β4	-0.48	0.62	1.62	0.46	-1.04	0.30
Mixed Race, β5	0.40	1.49	0.67	0.28	1.41	0.16
Male, β6	-0.21	0.81	1.23	0.11	-1.91	0.06
Free/Reduced Lunch, β7	-0.16	0.86	1.17	0.15	-1.04	0.30

Table 23.
School-and Student-Level Predictors of CBS Student Post-Secondary Path

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	-1.17	0.31	3.21	1.52	-0.77	0.44
Total Enrollment, γ1	0.00	1.00	1.00	0.00	-1.08	0.28
Percent of Teachers with Master's Degrees, γ2	0.00	1.00	1.00	0.01	-0.33	0.74
Average Teacher Experience, γ3	-0.04	0.96	1.04	0.04	-0.97	0.33
Teacher-Student Ratio, γ4	0.04	1.04	0.96	0.04	1.13	0.26
Percent Non-White, γ5	0.00	1.00	1.00	0.01	-0.18	0.86
Percent Male, γ6	0.01	1.02	0.99	0.02	0.79	0.43
Percent Free/Reduced Lunch, γ7	0.01	1.01	0.99	0.01	1.39	0.16
Percent Technical Programs, γ8	0.17	1.18	0.84	0.40	0.43	0.67
Percent College Credit Programs, γ9	0.66	1.93	0.52	0.51	1.28	0.20
Navigation 101, γ10	-0.05	0.95	1.06	0.16	-0.34	0.74
AVID, γ11	0.05	1.05	0.95	0.15	0.34	0.73
Black, β1	-0.02	0.98	1.02	0.19	-0.08	0.93
Hispanic, β2	-0.28	0.76	1.32	0.19	-1.49	0.14
Asian/Pacific Islander, β3	0.38	1.47	0.68	0.17	2.24	0.02
American Indian, β4	0.25	1.28	0.78	0.63	0.39	0.69
Mixed Race, β5	-0.36	0.70	1.43	0.28	-1.29	0.20
Male, β6	-0.22	0.81	1.24	0.11	-1.89	0.06
Free/Reduced Lunch, β7	-0.26	0.77	1.30	0.15	-1.74	0.08

Evaluation Question #7: What identified barriers and supports most impact the CBS program?

Evaluation Question #7a: For CB eligible students, what are the reasons why some never complete the FAFSA?

On the online survey, only 20 of the 1107 respondents had not completed the FAFSA application. During follow-up interviews, we identified three main themes in why they had not completed the FAFSA: (1) A student was not a legal citizen of the United States of America and thus did not apply for federal student aid; (2) the student planned to take time off from school after graduation and thus did not participate in any college preparatory paper work (applications, financial aid, etc.); and (3) the student did not have all the necessary paperwork to complete the FAFSA on hand when they attempted to complete it. Students who did complete the FAFSA indicated that their high schools provided support for completing the application through a variety of ways such as "senior nights," college and career advisor sessions, and online college-preparedness workshops.

Evaluation Question #7b: For CB eligible students, what are the reasons why some never apply to college?

Approximately 106 survey respondents indicated that they did not apply to college following high school, and of these, only three indicated that they did not maintain College Bound Scholarship eligibility. Students specified the need to work to earn money to fund college living expenses, to take time off from formal schooling, and to clarify personal goals as reasons why they had not enrolled in college in the first year out of high school. Nearly all interview respondents in this category noted their intention to enroll in the coming year and to use their college bound scholarship to fund their education.

Evaluation Question #7c: For CB eligible students, what are the reasons why some are accepted to college, but they don't attend college?

A small number of survey respondents (14) indicated that they had been accepted to college and did not attend in the 2012-13 school year. In interviews, participants largely noted their intention to attend college in the coming school year (2013-14), but that they had faced multiple barriers to attending this year. Students reported the financial costs of attending college (living expenses, commuting, etc.) as a main barrier to not having enrolled in their first year out of high school. Job demands and family reasons followed closely as reasons for not enrolling this year.

Nearly all participants still hope to utilize their College Bound Scholarships. Several students noted that there was a lack of confirmation of College Bound eligibility from their chosen institution and that they did not enroll due to financial aid personnel at the colleges telling them they were not receiving the scholarship or that there was too little to cover the cost of tuition. One student shared,

> Personally, I never attended college [even though I was accepted] is because the financial aid and scholarship money was not enough to cover my tuition and books when I was told it was supposed to. So now, instead of furthering my education, I am stuck working two part-time jobs. The scholarship is a great idea, but obviously didn't work out the way it was supposed to. It gave me false hopes of attending college.

A small sample indicated their life trajectory had pointed them away from college at this stage. One student stated in particular that "going to school would be a waste of time…going out of my way to make it to classes wouldn't work." This perspective was not common across the sample we contacted, however, as most students considered college a worthwhile endeavor and had hopes to engage in post-secondary education in the coming year.

Evaluation Question #7d: For CB students who attend college but do not complete the first quarter, what are their reasons for not persisting?

Of the students who responded to the survey and said they had attended college, 115 respondents reported having attended only part of the year. Of these students 11 has not earned any college credits and 58 students earned fewer than 15 credits (one quarter). Interviews identified several

reasons why students did not persist through a complete year. Students reported financial constraints and family reasons (several dealt with housing transitions, illnesses, gave birth to children, etc.) as the primary catalysts behind an incomplete year of college. In our interviews and survey responses, nearly all participants noted that despite not having completed a full year initially, they intend to enroll for the 2013-14 school year.

Evaluation Question 7e: For CB students who attend college but do not complete the first year, what are their reasons for not persisting?

Approximately 115 survey respondents reported having attended college only part of the year in the 2012-13 school year. Interview participants reported several reasons why they did not attend the whole year, including childcare (two students had children) and transfers from one institution to another midyear. All students in this category who agreed to be interviewed indicated that they are enrolled for college in the 2013-14 school year and intend to use their College Bound Scholarship, and nearly all students who were surveyed indicated a similar response.

Evaluation Question #8: What does literature reveal about the efficacy of early college going incentive programs?

As the push to ensure all Americans have access to post-secondary education reaches a climax, state and federal institutions are endeavoring to align education standards with the requirements of post-secondary and career readiness. A specific challenge in this process has been the difficulty of creating equal opportunities for post-secondary attendance to all socioeconomic and ethno-racial subgroups of the population. College readiness has traditionally followed socioeconomic status (SES) lines across the United States of America (USA), and the secondary school system is struggling to provide high quality education to all students in efforts to prepare them for college and career entry. In addition to providing equitable education opportunities, there is also the matter of creating equitable college access to students of all backgrounds through pre-college support systems, financial aid, and college-orientation/persistence programs. This literature review examines the background of college access equitability and measures that contribute to college persistence. There is a review of four moderately successful postsecondary scholarship programs, as well.

College Access. The United States (US) higher education system was the envy of the world for its quality and its contribution to creating the vast American middle class (Immerwahr and Johnson, 2007). Early on, a large percentage of the US population had access to college, especially through the GI Bill, which paid for World War II veterans to attend college. Things have changed over the past few decades, however. Although the US higher education system remains impressive, the percentage of the US population that is college educated has fallen below many other countries (OECD, 2011), and this lack of access to post-secondary education for a large percentage of the US population threatens the strength of American innovation and industrial/commercial competitiveness (Lumina Foundation for Education, 2009).

According to IPEDS, for full-time undergraduate students at a four-year institution in fall 2004, 58% completed a bachelor's degree at that institution within six years. For students attending a

community college, 51% received any certificate or transfer to a four-year institution (American Association of Community Colleges). With just about half of all students graduating from postsecondary institutions, President Obama in February 2009 made a commitment to increase college graduation rates. He stated, "By 2020, America will once again have the highest proportion of college graduates in the world."

The low percentage of college graduates cannot be attributed to a lack of desire to attend college from students. In fact, when middle and high school students are asked about their plans for the future, most say that they want to go to college (Wimberley and Noeth, 2005). For example, from 2010 to 2012, approximately 70% of Washington high school students (n = 19,797 to 23,636 per year) reported on a survey that they plan to attend college (Baker, Gratama, Brenner, Law, and Peterson, 2012). While it may be true that some high school students may say that to please their teachers, data show that educational achievement is associated not only with greater financial success but better health and well-being. The median salary of college graduates compared to high school graduates is 37% higher. In addition to higher salaries associated with a college degree, almost eight in ten future job openings in the next decade in the US will require some workforce training or postsecondary education (Holzer and Lerman, 2009).

As the United States continues to compete in a global economy that demands innovation, organizations have begun to address the knowledge and skills needed to succeed in the 21st century. They advocate for 21st century readiness for every student by providing tools and resources to help the United States education system. These collaborative organizations have focused their efforts on education coursework and skills needed for success in college, career, and life, which include critical thinking and problem solving, communication, collaboration, creativity, and innovation.

When we identify those who access higher education, it is clear that family factors have an impact. A large disparity exists between low-socioeconomic status (SES) and high SES families. Low-income students tend to enter college in much smaller numbers than middle-income and high-income students and are also more likely to attend community colleges (Bedsworth, Colby, and Doctor, 2006; Oseguera, 2012). The lack of low-income students attending college is likewise not due to academic performance. Statistics show that low-income high school graduates who perform in the top quartile on standardized tests attend college at the same rate as high-income high school graduates in the bottom quartile on the same tests, with some estimates of these low-income high achievers reaching one million students (Wyner, Bridgeland, Diiulio, 2007). In other words, the highest performing students with backgrounds of poverty are attending college at the same rates as the lowest performing students with backgrounds of wealth. This indicates that there are other traits that make it more likely that students from low SES will enter and persist through college. Researchers have begun to identify the barriers that these low-income high achieving students face. Findings from these studies show that the challenges many youth face begin before high school (Wyner, Bridgeland, Diiulio, 2007).

Many studies have shown that low-income students face challenges that are not purely financial (Bedsworth, Colby, and Doctor, 2006; Oseguera, 2012). One challenge is that many of these students will be the first in their families to attend college (first-generation students) and second

most of them will work while they attend college. According to the 2006 Spellings report (U.S. Department of Education), access to American higher education is "…limited by the complex interplay of inadequate preparation, lack of information about college opportunities, and persistent financial barriers" (U.S. Department of Education , p. 1). Thus, research has been initiated to look at the moderating and mediating factors impacting college success and persistence.

College Success/Persistence. According to National Center for Educational Statistics (NCES), a comparison of 1999–2000 to 2009–10 revealed the number of degrees earned among US residents increased for students of all racial/ethnic groups for each level of degree, but at varying rates. For associate and bachelor degrees, the change in percentage distribution of degree recipients was characterized by an increase in the numbers of degrees conferred to Black and Hispanic students. Despite this increase in percentage, low-income, minority students are the ones who are faced with the greatest academic and financial challenges in accessing and completing college (Spellings Report, 2006).

The substantial gap that exists between college attendance of low-income Americans and their more affluent peers also exists for college completion rates. Only 36% of college-qualified, low-income students complete a bachelor's degree within 8.5 years, compared with 81% of high-income students (Adelman, 2006). From 1970 to 2005, the bachelor's degree attainment rate by age 24 rose from 6% to 12% for low-income students but from 40% to 73% among the highest income group (Mortenson, 2007). A comparison of the percentage of students completing college degrees by race shows a similar disparity. Approximately 34% of Whites have obtained a bachelor's degree by age 29 compared to approximately 17% of Blacks and 11% of Latinos of the same age. These findings suggest that despite many years of student aid programs, family income remains a main factor in college success (American Community Survey report, 2010).

Armed with this knowledge, many researchers and government agencies have sought to identify and address the characteristics that impact this disparity. These barriers range from insufficient financial aid to mixed messages about academic preparation, poor understanding of admission and financial aid application processes, and limited community encouragement (IHEP, 2008). Analyses of financial aid programs show that federal, state, and institutional aid appears to be moving away from the students with the most financial need. For example, the Pell Grant program covered only 36% of the price of attendance at a public four-year institution in 2004-05, a drop from 42% in 2001-02. In addition, non-need based state aid has increased by 300% compared to need-based aid at 70% (NCES report, Woo and Choy, 2012).

Studies have examined the disparity between all academically qualified students and those who enroll in college (Pascarella and Terenzini, 1991; Spellings Commission report, 2006; Tinto, 1992; Walpole, 2007). Overwhelmingly, students who were qualified but did not enroll in college identified college cost and financial aid availability as primary obstacles to accessing and succeeding in college (Hahn and Price, 2008). School counselors echo the need for increased support, aid, and funding. Over 70% of counselors surveyed responded that not having enough aid or tuition cost was important in the decision of their students to not enroll (Hahn and Price, 2008). The financial cost of college involves a number of direct and indirect costs, including tuition, fees, books, transportation, and living expenses. In addition to the costs associated with college attendance,

students also forego a salary that they could have earned if they were not attending college. These lost wages are a particular barrier to college enrollment for minority and low-income students.

College Readiness. In addition to financial considerations, another significant issue for almost all academically qualified students who did not attend college includes the rigor of education preparation (Hahn and Price, 2008). Due to the 1994 reauthorization of the Elementary and Secondary Education Act (ESEA), states are able to set standards defining what their students should know in critical subjects as well as determine their performance on those standards. States do not have to consider whether their standards are based on evidence that identifies college and career readiness. This has resulted in state standards and assessments that do not generally align with the knowledge and skills necessary for students to succeed in college and/or careers.

This lack of accountability across the nation frequently results in low standards and inadequate academic preparation of high school graduates, large costs to individuals due to the time and cost of taking remedial courses in college, and also impacts the rate at which disadvantaged students persist to graduation from college (Alliance for Excellent Education, 2006). Among 2003-04 high school seniors who enrolled in postsecondary education within 2 years of graduation, 40% took remedial courses. In two-year colleges, 51% of students took remedial courses (NCES, 2010). In Washington State, 57% of students in a two-year college were enrolled in a remedial math course and 11% were enrolled in remedial English (NCES, 2011).

There are significant financial costs to the institution and the student associated with remedial courses, and students taking remedial courses are more likely to drop out of college (Alliance for Excellent Education, 2006). In response to these facts, there is now a strong push to make high school students college ready. The term 'College and Career Readiness' (CCR) refers to a high school graduate who has the skills and knowledge necessary to qualify for and succeed in entry-level, credit-bearing coursework. One of the components of CCR involves the development of rigorous curriculum and federal voluntary learning standards in core subjects. The Common Core State Standards (CCSS) are K–12 academic standards in mathematics and English language arts/literacy that are aligned to the entry requirements and skill mastery expectations of two- and four-year colleges. The CCSS were developed by a coalition of education professionals across the United States, and many states have voluntarily chosen to adopt them, which may impact the CCR of students over the coming years.

In addition to curricular rigor and advanced course offerings, CCR can also be addressed through comprehensive guidance counseling models. The College Board, a non-profit association that aims to improve access to and readiness for higher education, has devised 'Eight Components of College and Career Readiness Counseling' to provide school counselors a college and career approach to implement for all students that ensures equity both in process and results. Additionally, the American School Counseling Association and many state counseling associations have developed comprehensive school counseling models whereby counselors engage with students on multiple levels including course selection, college vision-casting, financial aid acquisition, and the traditional socio-emotional guidance in addition to focusing on 21st century skills that have been identified in various combinations as requisite to CCR: Creation, collaboration and communication, problem solving/critical thinking, and perseverance. School Counselors can serve an indispensable role in

preparing students for college and career, yet the field is underfunded at this point. Arranging college fairs, college visits, trade fairs, helping students select appropriate coursework, offering emotional support for first-generation potential college attendees, and providing guidance throughout the application process are only a few ways in which school counselors support the efforts to prepare students for college. Counselors are also integral parts of many programs that have arisen to support college and career readiness.

Many external programs have been established to increase college access, especially for underrepresented populations (for a comprehensive review, see Tierney, Bailey, Constantine, Finkelstein, and Hurd, 2009). Most of these programs offer financial assistance and include components to improve college readiness. Several states and cities have adopted scholarship programs to help students pay for college. Researchers have begun to investigate alternative effective options to prepare students for college-level classes and reduce the number of remedial courses required. Most of these scholarship and support programs target students in need. Although discussing all of these programs is beyond the scope of this paper, four representative programs are described below. These include the *21st Century Scholars Program of Indiana*, *Oklahoma Promise*, *Pittsburgh Promise*, and *Kalamazoo Promise Scholarship*.

21st Century Scholars Program. Indiana started the 21st Century Scholars program (TCS) in 1990 to ensure that every student who graduated from an Indiana High School could afford a college education. This program is targeted at low-income 7th and 8th graders with one of its goals focused on increasing college enrollment among low-income students. TCS guarantees up to four years of undergraduate tuition at a public institution in Indiana. TCS students are required to enroll in the program, graduate with a cumulative GPA of 2.0 (on 4.0 scale), and fulfill a pledge of good citizenship. They are also offered mentoring, free tutoring, help finding a part-time job, and support to finish college.

TCS has the most comprehensive set of evaluation information of all state and community scholarship programs. This is due, in part, to its longevity, but it is also due to the commitment of the state of Indiana and the Lumina Foundation toward program evaluation. As stated earlier, one of the intentions of TCS was increasing college enrollment among low-income students. Since its inception, TCS has nearly doubled its participation rate. It enrolls approximately 7,500 students annually, which is close to one-third of eligible 8th graders statewide and 9% of all 8th graders in Indiana. During the 2011 enrollment, 7,994 new students were enrolled.

The University of Michigan has completed many studies using data collected during the initial years of the program. These data pre date the support systems offered after the initial inception and many have claimed that these data are unfair. With that caveat, their findings are reported below. Investigating the effects of the 21st Century Scholars program on high school graduation rates and academic rigor, they found that being a Scholar increased the likelihood that a student would graduate with academic honors by 37%. This seemed to be especially significant for African American males. Also, Scholars were 29% more likely to complete advanced math class, such as calculus, in high school, which would enable them to qualify for better colleges.

Research has shown that up to 85% of 21st Century Scholars who signed up for the program in eighth grade were in college within a year after their expected high school graduation in 1999. A comparison of the type of high school diplomas received by Scholars versus other Pell-grant recipients shows a 7% increase in Scholars who graduated with academic honors. They also found that Scholars were more likely to take the SAT than other Pell-grant recipients (75% versus 65%); however, the SAT scores did not vary between the two groups.

College attendance rates for TCS were estimated using various databases. These estimated rates show an 85% college attendance rate within one year of graduation for Scholars compared to an estimated 56% attendance rate for non-Scholars. Sixty-four percent of Scholars who enrolled in 1995 were enrolled in an Indiana college or university, 16% in private or proprietary schools, and 5% in out-of-state institutions. Forty-eight of those institutions were public four-year colleges. According to the State Student Commission of Indiana, 48% of Scholars attended an Indiana school from 2000-2006 and had a 90% retention rate. The average college attendance rate for Indiana was 42% over the same period with a 62% retention rate. Both findings show higher retention rates for Scholars.

An important determinant of program success relates to college persistence rates. Researchers investigated within year persistence in the 786 of 1132 Scholars who enrolled in 2- or 4-year colleges. They found that within-year persistence for Scholars was 86%, non-Scholars with another form of aid 89%, and those with no aid 85%. These persistence findings led them to conclude that financial aid helps students stay in college, but the type of aid was "immaterial."

To analyze student college graduation rates, researchers tracked 1,224 Scholars and 23,021 non-Scholars. They analyzed six-year persistence rates and measured three outcomes: 4-year attainment, 2-year attainment, and persistence with no degree. They found that only 32% of Scholars earned a degree and almost half of all Scholars had dropped out of college within six years of graduating. When compared to other aid recipients, they found that Scholars were less likely to earn a degree, with lower graduation rates at 2-year schools. Together, these studies offer no evidence that participating in 21st Century Scholars program improves college students' chances of persistence to graduation. Overall, findings show that Scholars are more likely to pursue academically rigorous classes in high school, take the SAT, enroll in college right after high school graduation, and choose a 4-year college. Scholars do not fare differently than other low-income students in college, but they fare much worse than college students without aid.

Oklahoma's Promise. The state of Oklahoma began the Oklahoma Higher Learning Access Program (OHLAP), known as Oklahoma's Promise (OP), to help "deserving students succeed." OP is recognized by many as America's best college access program and is considered a model that emphasizes both academic preparation and financial support for college. This program assists students whose families earn less than $50,000 annually and who meet specific academic and conduct eligibility requirements. Students sign up in the 8th, 9th, or 10th grade and are required to take specific high school courses and do well in their studies. Students must also show that they are in control outside the classroom by staying away from trouble like drugs, alcohol, and gangs. In return, the state of Oklahoma promises to help pay students' college tuition. The first scholarships were awarded in 1996, and since then, college students have received more than $300 million in

scholarships through the program. An estimated 20,300 students will receive OK Promise scholarships in FY (fiscal year) 2012.

The program has produced many positive results in the academic success of students (Oklahoma State Regents for Higher Education, 2012). Since 2002, OK Promise participants have higher high school GPAs, attend college at a higher rate than nonparticipants, have lower remediation rates, perform better in college, and have higher college freshman to sophomore persistence rates than nonparticipants. Full-time college enrollment is also higher for OK Promise participants. From 2009-2010 through 2011-2012, enrollment rates averaged 90% for participants compared to 79% for nonparticipants. Degree completion rates at college, which many programs have not been able to address due to the recent start of their programs, are also higher for OK Promise participants. Degrees attained by school year 2011-2012 were calculated based on years attending with OK Promise participants showing a 10% increase in degree attainment over nonparticipants. For freshman enrolled in 2003 (9 years), the degree attainment rate was 57.6% for OK Promise participants compared to 46.6% for nonparticipants. For 2007 freshman, the attainment rate was 41.2% compared to 31.7%. Although these rate differences are high in comparison to other students, a recent report suggests that the Oklahoma's Promise's goal should be redirected from college enrollment to achieving a college degree (Shinn, 2013).

The further purpose of this program is to establish and maintain a variety of support services whereby a broader range of the general student population of this state will be prepared for success in postsecondary endeavors. Toward that goal, OP has formed collaborations with other organizations designed to help students be successful in high school and college. The Educational Planning and Assessment System (EPAS) offers extensive diagnostic testing for 8th and 10th graders in English, math, science reasoning, and reading. These tests have helped raise standards and expectations for all students, especially traditionally underrepresented students. OP also works with Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP). GEAR UP is the capstone program that serves school districts, promotes OK Promise, and helps students and parents prepare for college. Oklahoma's GEAR UP social marketing campaign uses mass marketing techniques to raise public support for access to higher education. These collaborations have increased enrollment in college preparatory classes, especially among low-income and minority students. Enrollment in the OP program has increased from approximately 1,600 students in the class of 1996 to approximately 9,300 students in the class of 2006.

Pittsburgh Promise. In December 2006, the mayor of Pittsburgh and the superintendent of Pittsburgh Public Schools partnered to announce The Pittsburgh Promise (PP) as part of a citywide commitment to economic, intellectual, and social revitalization of the region. Their goals were to mitigate the declining population rates in Pittsburgh, the declining enrollment rates in Pittsburgh Public Schools (PPS), increase college readiness in students, and establish a well-trained workforce. PP was launched in the fall of 2007 and provides up to $40,000 per student to pursue higher education at accredited postsecondary education institutions in Pennsylvania for those who live in the City of Pittsburgh and graduated from PPS and PPS-approved charter schools. Eligibility requirements include having a 2.5 minimum GPA, maintaining a 90% minimum attendance record, and earning admission to any accredited public or private post-secondary school located in Pennsylvania.

What is unusual about PP is that the scholarship funds are provided by donations from local private funders, nonprofit foundations, and businesses. The Pittsburgh Federation of Teachers was the first contributors of $10,000. Since then, the Pittsburgh community has received grants of up to $10 million a year.

An external review by RAND Corporation (Gonzales, Bozick, Tharp-Taylor, and Phillips, 2011) found that PP was off to a solid start. Although the program was still in its initial stages during the review, positive results were found in a number of indicators. Student enrollment in PPS traditional schools has stopped declining since PP began. Using survey data from parents who were new to PPS schools in the 2007–2009 school years, researchers found that PP was an important factor in parents' decisions to enroll their children in public schools within the district. Parents on average rated PP highest in importance out of 11 possible factors that influenced their decision to move their children. This was particularly important for parents of African-American students and parents with lower levels of education. Results from focus groups suggested that PP motivates students to achieve. Students consistently reported that PP funds motivated them to strive for a 2.5 GPA, attend school regularly, and pursue postsecondary education. They also reported that their parents pushed them to attend school and meet the 2.5 GPA requirements that would make them Promise ready.

Since PP began, an increasing number of PPS students meeting eligibility requirements are enrolling in postsecondary education. From 2006 through 2010, the enrollment of PPS traditional public high school graduates who would be eligible for PP in postsecondary education institutions increased steadily. This was true for all students, irrespective of race or income levels. This suggests that in the early years of the program, more students who meet PP's eligibility requirements are deciding to continue their education after high school.

For PPS district graduates enrolled in postsecondary education, PP may have helped specific students eligible for funds stay in school. Persistence rates for PPS traditional high school students who graduated in 2006–2010 declined slightly from the fall of freshman year in college to the fall of sophomore year, while persistence rates of PPS traditional public high school graduates who would be eligible for PP remained constant over this time frame. This suggests that PP may be providing support to students at a time when a number of their peers are withdrawing from college. This was the case primarily for eligible white and regular-price-lunch students; persistence rates for non-white students and those eligible for free or reduced-price lunches declined slightly through the years. Additional support may be needed for the latter groups, because they appear to be most at risk for leaving college without a college degree.

The Kalamazoo Promise Scholarship. The Kalamazoo Promise (KP) was announced in November 2005 and is unique in a few ways. First, it is funded by a group of anonymous donors. Second, scholarships are awarded based on continuous enrollment and residency within the KPS for a minimum of four years. For students who have attended and resided in KPS for their entire K-12 education, the scholarship covers 100% of their tuition and fees at a Michigan public college or university. For students who have attended KPS since ninth grade, their scholarship covers 65% of tuition and fees. Third, eligibility for the scholarship is universal – any student who graduates from

KPS can utilize the scholarship irrespective of financial need, which represents a dramatic change from traditional scholarship models that are mostly based on financial need and/or academic merit. Another unique aspect of KP is that the scholarship funds are awarded before any other source of funding is considered. This enables students to access additional financial aid, such as federal Pell Grants or institutional scholarships, and add them to their KP funding. Lastly, students can access the scholarship money for up to ten years after they graduate high school.

The universal eligibility provision of the Kalamazoo Promise has been critical to the success of the program. The most striking result of the KP has been enrollment growth in KPS. After decades of decline, the district has grown by over 20% since 2005. At the same time, there has been little change in its racial, ethnic, or demographic make-up, which suggests that the KP has equally affected enrollment among black, white, Hispanic, middle-income, and low-income students.

Research carried out by Upjohn Institute economists (Bartik and Lachowska, 2012) demonstrates that KP had strong immediate effects in improving academic achievement and student behavior. These effects included higher GPAs, increased enrollment in advanced placement (AP) courses, a reduction in the number of days of suspensions, and an increase in a student's probability of being promoted to the next grade. KP has also led to concerted efforts to strengthen the college-going culture of KPS. An intensive focus on early literacy, new college-awareness programs, and a rapid expansion of AP enrollment are all part of the post-Promise picture.

This enrollment increase has underpinned some important economic effects of the KP, including the addition of new families into the school district, better retention of existing students, new teachers and staff, and the first new school construction in four decades. Enrollment growth has also reinforced voter support for school bond requests and has helped the region retain its population level in the midst of a pronounced economic downturn. In the first few years following the introduction of the KP, almost 90% of KPS graduates have opted to continue their education beyond high school. This rate is remarkable for an urban school district where 70% of students are economically disadvantaged. Community engagement around the goals of KP has been strong. Businesses have become involved in supporting schools and students, and economic development leaders have aligned their message around the idea of Kalamazoo as an education community. Services such as tutoring and mentoring are available both within and outside the schools due to community volunteers who believe in doing their part to support student success.

The depth and breadth of community involvement has been recognized by national awards. Kalamazoo has been named one of America's 100 Best Communities for Young People three times since KP was announced. Recently, the emphasis on education and opportunity has expanded to encompass the entire region. The Learning Network of Greater Kalamazoo was started to support educational attainment for K-12 students throughout the county, while other regional initiatives have begun to target universal high-quality preschool, child and adult literacy, and improved college access and awareness.

A recent analysis of academic indicators, comparing data from 2012 to data from 2008, was undertaken by the MLive/Kalamazoo Gazette (Mack, 2013) to determine if and how the KP efforts have made a difference in student achievement. Comparing percentile-point changes in the passage

rate on the Michigan Educational Assessment Program, they found that Kalamazoo's passage rate for all students increased from 23% to 28%. Kalamazoo's achievement gap did not narrow because strong gains were made by the district's middle-class and White students. But low-income and minority students also showed gains, and KPS African-Americans are no longer underperforming their urban peers. In Kalamazoo Central High School's Class of 2012, 93% of African-American women graduated on time last June, which is the best graduation rate for any demographic group in the district.

College persistence data gathered from 300 KP recipients enrolled at Western Michigan University (WMU) for a doctoral dissertation (Bakerson, 2009), show that since 2006, when the first scholarships were awarded, 67% persisted, 17% were on probation, and 16% were academically dismissed. These rates are specific to WMU and cannot be extended to all KP recipients, because KP participants attend approximately 26 various institutions (Jorth, 2009 as cited in Bakerson, 2009). Degree attainment data for the KP program show that, as of 2012, seven classes covered by KP have graduated but less than 500 students have graduated (Fishman, 2012). These low numbers are believed to reflect difficulties not related to college costs students face in trying to complete college in four years. This is especially true for students from low-income families.

KP illustrates some of the most powerful advantages of a universal social program. By serving students at all income levels, it avoids the stigma that sometimes is attached to programs designed for poor children. The fact that all postsecondary options are included means that an academically weak student can still benefit from the scholarship and gain valuable technical skills that will change his or her economic future. KP has begun to transform the lives of individuals who take advantage of the program and the community as a whole; however, it is important to note that college persistence and degree attainment data need to be continually compiled and updated to address how well these scholarship recipients' fare in college.

Overall Summary. The common goal of these scholarship programs is to increase student access to college and promote better economic outcomes for the students as well as communities. All offer financial assistance but vary on other characteristics, such as course requirements, students who are eligible, level of financial aid, age at sign up, and whether the funding occurs before or after other financial aid (see Table 24). Overall, there are many positive signs from these scholarship programs. Increased performance in high school performance has been observed across all programs, irrespective of their programmatic differences. They have also increased full-time college enrollment and attendance rates for participants and Scholars, with many programs continuing to observe a steady increase. Not all rates have increased across the programs; however, and these may be due to the differences in the way these variables are analyzed.

One such rate is college persistence. For example, 21st Century observed an increase in overall persistence rates for Scholars compared to non-Scholars by almost 28 percentage points (90% vs. 62%). When they analyze within-year persistence rates and compare them to other aid recipients, they find no statistical difference between groups. For Pittsburgh Promise Scholars, persistence rates for freshman to sophomore year remained constant from 2006-2010 while traditional HS student persistence rates declined. From the studies that have college graduation data, they show that almost half of all Scholars have dropped out by six years without completing a degree, which is

less than traditional student rates. In Oklahoma, however, OK Promise participants graduate at a higher rate than non-participants by 10 percentage points. While the variation in these results most likely reflects the characteristic differences of the programs, it helps to point out that funding is necessary but not sufficient to increase college graduation rates. With so many resources being used toward these programs, many stakeholders are attempting to determine how well these programs are working. With some descriptive information available, it is important that these programs include evidence-based research to address the other factors that contribute to student graduation and persistence rates.

Table 20.
Comparison of Programs

	Kalamazoo Promise	Pittsburgh Promise	Oklahoma Promise	21st Century Scholarship (Indiana)	College Bound Scholarship
Type of Scholarship	resident scholarship	resident scholarship	needs-based scholarship	needs-based scholarship	needs-based scholarship
Year implemented	2005	2007	1996	1990	2007
Application requirements	application	FAFSA and application	FAFSA and application	FAFSA and application	FAFSA and application
Academic Requirements	none in HS; 2.0 in post-secondary school	2.5 gpa	2.5 gpa and complete specific courses	2.5 gpa, participate in Scholar Success Program, and take specific courses	2.0 gpa
Financial Requirements	none	none	annual family income $\geq$ $50,000	annual family income varies based on number of family members. ($\geq$$44,000 for family of 4)	annual family income $\geq$ $50,000
When students apply	12th grade	before student graduates from high school	8th, 9th or 10th grade	7th or 8th grade	7th or 8th grade
Costs covered	tuition and mandatory fees	tuition and fees	tuition and fees	tuition and fees	tuition and minimal costs for books
Financial limit	100% tuition and mandatory fees cost	up to $40,000/student	none listed	none listed	$40,000/student
How is scholarship funded	anonymous, private investors	private donors	state funded	state funded	state funded

Other services provided by program	**none**	**student outreach at high schools, mentoring, school attendance campaign, and college tours**	**none**	**tutoring, mentoring, academic counseling, drug prevention, SAT preparation, and job placement**	**partner with organizations for student outreach**
Scholarship length	4 year scholarship	4 year scholarship	5 year scholarship	4 year scholarship	4 year scholarship
Institutions where scholarship can be used	in-state colleges and universities and trade certification or degree programs	any accredited post-secondary institution in Pennsylvania	Oklahoma state colleges and universities, some technical schools	any participating public college or post-secondary institution in Indiana	WA community or technical college, public institution, or approved college or university
Time limit for application	10 years after high school graduation	5 years after high school graduation	3 years after high school graduation	1 year after high school graduation	2 years after high school graduation

PROMISING PRACTICES

Researchers analyzed the practices occurring at the high performing high schools that had higher rates of using the CBS and that appeared to be contributing to some of the improvements in students attending college. Because the program is relatively new, these practices are just emerging, and in some cases, the practices are not fully developed at the higher performing schools. The emerging promising practices include school-wide focus on college readiness, stakeholder knowledge of College Bound, and data-driven support.

School-wide focus on college readiness. A predominant theme among staff member interviews at high schools with high rates of college going College Bound Scholars was college readiness. These schools described robust school wide and even district wide systems that are in place to prepare students for success in college. These systems included many options for students to partake in college preparation classes, programs and ongoing events. While College Bound Scholars as a group may not receive additional support these schools tend to provide an individualized student focus with vertical and horizontal collaboration among the middle and high school staff members to aid every student in being college ready. Similarly, data from the Student Perspectives Questionnaire *Future Focus* factor showed the extent to which schools adequately prepared the students' for college and career positively impacted their students graduation, college enrollment and scholarship rates.

Stakeholder knowledge of College Bound. A common barrier stated throughout this report is the extent to which information regarding College Bound is effectively communicated to stakeholders. The range of knowledge held by College Bound stakeholders stretches across the spectrum of no knowledge to in-depth understanding of the program. In general, staff members and students from

the high schools with high rates of college going College Bound Scholars described a clearer understanding of the programs rules and expectations and these were communicated to the students. Furthermore, many of these schools had a "College Bound Champion" who was a clear point person for information, informed staff and students about the program, and assisted students in meeting program requirements.

Data-driven support. Across all levels of schools, stakeholders explained that there was very limited use of data, and in some cases, students were not even designated as a College Bound Scholars within the student information system. This lack of information limits the extent to which school personnel can provide personalized to students and prevents school personnel from created targeted interventions for College Bound Scholars.

However, some schools have begun to designate the College Bound Scholars in the student information system. At these schools, personnel know who the students are, can keep students updated with information on timelines and requirements, can encourage students to take more rigorous courses, and can assist students in maintaining eligibility requirements. For example, in one school, staff members track students and provide additional support as students GPA falls below a 2.0.

SUMMARY AND RECOMMENDATIONS

The College Bound Scholarship program was designed to make college more affordable and accessible for low-income students, to raise educational attainment, and to create a college going culture in Washington State. The purpose of this report is to understanding the impact of the College Bound Scholarship for the 2012 graduates, the first cohort to use the scholarship.

Since the onset of the program, the middle schools have been successful at signing up students for the scholarship. For the first cohort (2012 graduates), 57% of eligible students signed up for the scholarship, and by the fifth cohort (2016 graduates), 80% of eligible students signed up for the scholarship. Despite this success, students and stakeholders report that college preparatory support in the secondary schools varies considerably, and for the most part, it is not available often enough. College level supports are developing as well. An analysis of high schools that have had success in students using the College Bound Scholarship and attending college, we found the schools were more intentional in the support for College Bound Scholars, with a greater focus on college preparation. In addition, these schools had staff members who were knowledgeable about the College Bound Scholarship, were able to track students' progress towards meeting the requirements, and worked with students at each grade level to prepare students for college.

The results from the first cohort of students show that College Bound Scholars had greater of odds of meeting college admission requirements compared to students who received free and reduced lunch and compared to their non-free and reduced lunch peers when controlling for other variables. Similarly, the College Bound Scholarship had higher odds of enrolling in college and persisting into their second year compared to students who received free and reduced lunch and compared to their non-free and reduced lunch peers when controlling for other variables.

Our statistical analyses examined both school and student level predictors of college enrollment, college persistence through the first year, and college persistence into the second year. While there were some variations across the analyses, there were also some consistent patterns. Among the school level variables, we found a relationship between a school's participation in Navigation 101 and students' enrollment in college, persistence through the first year, and persistence into the second year. Among the student level variables, we found that Black and Asian American students had greater odds of enrolling in college and persisting through the first and second year of college than White Students. High school preparedness was also a significant predicator of enrollment and persistence, with math, science, foreign language, and social studies emerging as strong predicators. Furthermore, Running Start and AP/IB course taking also predicted greater outcomes. Finally, students' GPA was generally the strongest predictor of enrollment and persistence.

Overall, results from the first cohort of students show promise. The College Bound Program was designed as an early promise to help motivate students to pursue a college degree and to provide some financial support to attend college. While there was no funding for a comprehensive program of support at the middle school, high school, and college levels, these are beginning to emerge in response to the program needs. To continue to improve outcomes, we suggest the following recommendations.

Recommendations

Build Systemic Program Support. A fundamental strategy of implementing a successful program is to create buy-in from stakeholders. Through data collection, it is evident buy-in for College Bound at the high school and college levels can improve. Stakeholders from WSAC and CSF indicated they are working towards identifying "champions" within high schools, but have not had significant progress towards these efforts because the primary focus is to sign up College Bound students, which occurs at the middle school level. Stakeholder buy-in should be targeted at all relevant levels of the program including leadership, staff, and students across middle schools, high schools and state postsecondary institutions to provide ongoing system support throughout a College Bound Scholars education.

Furthermore, to enable students to continually work towards the goal of attending and persisting in college, systemic program supports should be developed and implemented within schools. College Bound students identified a need for greater college preparation while in high school, through developing time management, study skills, and financial skills, and being prepared for the rigor of college course content. While many high schools offer some level of college preparation programs and classes, not all College Bound students have the opportunity to take part in these programs. Outcomes from high school interviews showed that high schools with higher rates of College Bound Scholars enrolled in college had more opportunities to partake in college preparation activities in high school. Additionally, at the college level, providing targeted support for College Bound Scholars will ease the transition across schools and create an environment in which students are more likely to succeed.

The College Bound Scholarship program is designed to provide the motivation to attend and succeed in college through the early promise and the financial aid to attend college. However, maintain this is reliant upon systemic program support. Stakeholders across the board commented that College Bound provided hope and motivation for students to go to college. However, many students and staff members commented that by their senior year of high school, they had forgotten about the program due to no support or communication regarding College Bound, and therefore, the potential intangible impact of the scholarship was lost. Furthermore, College Bound Scholars described the need for greater college preparation and support in college to enable them to succeed in college. In order for the scholarship to make the expected outcome of getting students through college then program support should be provided before and during college to achieve that goal.

Create an Accessible Data System. The difficulty in identifying and tracking College Bound students is highlighted throughout this report. Many staff members commented they are not able to identify College Bound students unless a list is sent from WSAC or the middle school, which is not necessarily provided at the beginning of the year and is often not complete, due to high student mobility rates and inaccurate data. Staff members commented the benefits of having an accessible student list could provide targeted class schedules, student outreach, and early GPA monitoring. The development of a robust data system, which allows middle schools, high schools, and postsecondary education institutions access to their College Bound student data creates the ability for each school to take ownership of their students and to provide support at any point throughout the year.

Increase Outreach and Communication. The lack of communication and outreach within the College Bound program was one of the most frequently sited areas for improvement. The ability to increase communication and outreach efforts ties into the recommendations listed above of developing a systemic support program with accessible data. As evidenced through focus groups there is a broad spectrum of knowledge concerning College Bound and a specific need for increased clarity regarding the programs eligibility and financial expectations. Stakeholders would also like to receive ongoing communication regarding their individual progress along with pertinent information for their grade level as they prepare for college. Providing frequent communications, guidelines, and progress reports to stakeholders will results in a better understanding of the program and increase the likelihood of impacting students. Furthermore, empowering staff members with information or having a College Bound Champion on staff will assist with these efforts.

REFERENCES

Bakerson, MA. (2009) Persistence and success: A study of cognitive, social, and institutional factors related to retention of Kalamazoo Promise recipients at Western Michigan University.

Bakerson, MA. (2009) Persistence and success: A study of cognitive, social, and institutional factors related to retention of Kalamazoo Promise recipients at Western Michigan University.

Bartik, T.J., and Lachowska M. (2012). The Short-Term Effects of the Kalamazoo Promise Scholarship on Student Outcomes. Upjohn Institute Working Paper No. 186. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

Bedsworth, W., Colby, S., & Doctor, J. (2006). Reclaiming the American Dream. Boston, MA: Bridgespan.

Blanco, C.D. (2009). State and Community-based Promise Programs: Early Commitments of Financial Assistance for College: Pathways to College Network: IHEP.

Fishman, T.C. Why These Kids Get a Free Ride to College. *New York Times* 13 September 2012: Print.

Hahn, R. D., & Price, D. (2008). Promise lost: College-qualified students who don't enroll in college. Washington, DC: Institute for Higher Education Policy.

Hershbein, B.J. (2013). A Second Look at Enrollment Changes after the Kalamazoo Promise. Upjohn Institute Working Paper 13-200. W.E. Upjohn Institute for Employment Research.

Gonzalez, G.C., Bozick, R., Tharp-Taylor, S., Phillips S. (2011). Early Progress of Pittsburgh's Postsecondary Scholarship Program. RAND Corporation.

Holzer, H. and Lerman, R. (2009). The Future of Middle-Skill Jobs. Center on Children and Families.

Immerwahr, J., & J. Johnson. (2007, May). Squeeze play: How parents and the public look at higher education today (National Center Report #07-4).

Lumina Foundation. (2009). A stronger nation through higher education. How and why Americans must meet a "big goal" for college attainment.

Mack, J. New Kalamazoo Promise data: Students fail or drop 31% of KVCC courses paid by scholarship, but numbers are improving. *MLive/Kalamazoo Gazette* 10 March 2013.

National Center for Education Statistics. (2010). Drop-out and completion rates in the United States—2007. Washington, DC.

OECD. (2011). *Education at a Glance 2011: OECD Indicators*, OECD Publishing.

Oseguera, L. (2012). *High School Coursework and Postsecondary Education Trajectories: Disparities between Youth Who Grow Up In and Out of Poverty*. Pathways to Postsecondary Success.

Pascarelli. E., Terenzini, P. (1991).*How college affects students*. San Francisco: Jossey-Bass.
Shinn, P. (2013). BETTER BENEFITS FOR OKLAHOMA FAMILIES: ISSUE 3. Better Benefits for Oklahoma Families. CAP Tulsa.

Stern, P. and Pavelchek, D. (2006). Who's prepared for college work? Washington State University Social & Economic Sciences Research Center: Olympia, WA.

Tierney, W.G., Bailey, T., Constantine, J., Finkelstein, N., and Hurd, N.F. (2009). *Helping students navigate a pathway to college: What high schools can do: A practice guide.* (NCEE #2009-4066). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

U.S. Department of Education. (2006). *A Test of Leadership: Charting the Future if U.S. Higher Education.* Washington D.C.

Wimberly, G. L., & Noeth, R. J. (2005). College readiness begins in middle school. Iowa City, IA: ACT, Inc.

Wyer, J.S., Bridgeland, J.M., Diiulio, J.J. Jr.(2007). Achievement Trap: how America is failing millions of high-achieving students from lower-income families. The Jack Kent Cooke Foundation & Civic Enterprises.

APPENDIX A: RISK FACTORS

APPENDIX A: RISK FACTORS

We assessed the relationship between three risk factors, failure of classes, number of days present in school, and suspension/expulsion. The sample contained 1,656 students from 21 high schools. We used a series of four GLMMs to assess the relationship between the three risk factors and four outcomes, college enrollment, full-time enrollment, persistence, and post-secondary path. The models controlled for school-level variables, including demographics, measures of teacher quality, and measures of high school quality. The model also controlled for student level factors, including ethnicity, gender, free/reduced lunch status, and high school preparation. Controlling for all other variables in the model, we did not find significant relationships between class failure and suspension/expulsion with any of the outcomes. We found a positive relationship between number of days present in school and enrollment, full-year enrollment, and persistence. Students who attended more days of high school had higher odds of enrolling in college, completing their first year of college, and persisting into their second year of college. None of the risk factors predicted students' decision to attend 4-year institutions.

Table 25.
School-and Student-Level Predictors of CBS Student Enrollment

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	-5.25	0.01	190.63	2.74	-1.92	0.06
Total Enrollment, γ1	0.00	1.00	1.00	0.00	1.01	0.31
Percent of Teachers with Master's Degrees, γ2	0.00	1.00	1.00	0.02	0.12	0.91
Average Teacher Experience, γ3	0.00	1.00	1.00	0.06	-0.04	0.97
Teacher-Student Ratio, γ4	0.11	1.12	0.89	0.08	1.40	0.16
Percent Non-White, γ5	-0.03	0.97	1.03	0.03	-1.10	0.27
Percent Male, γ6	-0.02	0.98	1.02	0.02	-0.67	0.50
Percent Free/Reduced Lunch, γ7	0.03	1.03	0.97	0.02	1.16	0.24
Percent Technical Programs, γ8	0.03	1.03	0.97	0.97	0.04	0.97
Percent College Credit Programs, γ9	-1.03	0.36	2.80	0.83	-1.23	0.22
Navigation 101, γ10	0.22	1.24	0.80	0.25	0.86	0.39
AVID, γ11	-0.44	0.64	1.55	0.27	-1.63	0.10
Black, β1	0.76	2.15	0.47	0.20	3.76	<.001
Hispanic, β2	-0.44	0.65	1.55	0.17	-2.50	0.01
Asian/Pacific Islander, β3	0.39	1.48	0.68	0.16	2.39	0.02
American Indian, β4	1.11	3.03	0.33	0.73	1.53	0.13
Mixed Race, β5	-0.02	0.98	1.02	0.26	-0.09	0.93
Male, β6	0.01	1.01	0.99	0.12	0.08	0.94
Free/Reduced Lunch, β7	-0.03	0.97	1.03	0.13	-0.21	0.83
Met English Standard, β8	0.12	1.13	0.88	0.14	0.88	0.38
Met Social Science Standard, β9	0.61	1.84	0.54	0.28	2.19	0.03
Met Science Standard, β10	0.56	1.74	0.57	0.19	3.00	<.01
Met Foreign Language Standard, β11	0.37	1.45	0.69	0.15	2.52	0.01
Met Fine Art Standard, β12	0.29	1.33	0.75	0.20	1.43	0.15
Math Level, β13	0.14	1.15	0.87	0.06	2.28	0.02
AP/IB, β14	0.32	1.38	0.72	0.15	2.14	0.03
Running Start, β15	-0.71	0.49	2.02	0.16	-4.31	<.001
GPA, β16	0.58	1.79	0.56	0.14	4.17	<.001
Failed Class, β17	-0.05	0.95	1.06	0.16	-0.35	0.73
Number of Days Present, β18	0.01	1.01	0.99	0.00	2.93	<.01
Suspended/Expelled, β19	0.22	1.24	0.80	0.16	1.37	0.17

Table 26.
School-and Student-Level Predictors of Full-Year Enrollment

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	-10.60	0.00	40134.84	3.59	-2.95	<.01
Total Enrollment, γ1	0.00	1.00	1.00	0.00	-0.40	0.69
Percent of Teachers with Master's Degrees, γ2	0.00	1.00	1.00	0.02	-0.02	0.99
Average Teacher Experience, γ3	0.04	1.04	0.96	0.08	0.52	0.60
Teacher-Student Ratio, γ4	0.24	1.27	0.79	0.10	2.30	0.02
Percent Non-White, γ5	-0.01	0.99	1.01	0.04	-0.23	0.82
Percent Male, γ6	-0.03	0.97	1.03	0.03	-1.10	0.27
Percent Free/Reduced Lunch, γ7	0.02	1.02	0.98	0.04	0.62	0.54
Percent Technical Programs, γ8	0.59	1.81	0.55	1.30	0.45	0.65
Percent College Credit Programs, γ9	-0.59	0.55	1.80	0.96	-0.62	0.54
Navigation 101, γ10	0.46	1.59	0.63	0.34	1.38	0.17
AVID, γ11	-0.36	0.70	1.43	0.33	-1.08	0.28
Black, β1	0.76	2.14	0.47	0.22	3.51	<.01
Hispanic, β2	-0.46	0.63	1.59	0.19	-2.38	0.02
Asian/Pacific Islander, β3	0.42	1.53	0.65	0.16	2.58	<.01
American Indian, β4	1.69	5.40	0.19	0.80	2.12	0.03
Mixed Race, β5	-0.36	0.70	1.43	0.28	-1.27	0.20
Male, β6	0.04	1.04	0.96	0.13	0.30	0.77
Free/Reduced Lunch, β7	-0.20	0.82	1.23	0.14	-1.48	0.14
Met English Standard, β8	0.24	1.28	0.78	0.16	1.54	0.12
Met Social Science Standard, β9	0.44	1.56	0.64	0.35	1.27	0.20
Met Science Standard, β10	0.66	1.94	0.51	0.24	2.78	0.01
Met Foreign Language Standard, β11	0.52	1.68	0.60	0.17	3.10	<.01
Met Fine Art Standard, β12	0.07	1.07	0.94	0.24	0.27	0.79
Math Level, β13	0.15	1.16	0.86	0.06	2.28	0.02
AP/IB, β14	0.58	1.78	0.56	0.15	3.76	<.001
Running Start, β15	-0.45	0.64	1.57	0.16	-2.86	<.001
GPA, β16	0.86	2.35	0.42	0.15	5.56	<.001
Failed Class, β17	-0.17	0.84	1.19	0.16	-1.10	0.27
Number of Days Present, β18	0.01	1.01	0.99	0.00	3.24	<.01
Suspended/Expelled, β19	0.13	1.14	0.88	0.17	0.73	0.47

Table 27.
School-and Student-Level Predictors of Persistence

Variable	*Coefficient*	*Odds Ratio*	*1 / Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	-9.62	0.00	14997.35	3.35	-2.87	<.01
Total Enrollment, γ1	0.00	1.00	1.00	0.00	-0.46	0.65
Percent of Teachers with Master's Degrees, γ2	0.03	1.03	0.97	0.02	1.41	0.16
Average Teacher Experience, γ3	0.06	1.06	0.94	0.07	0.87	0.39
Teacher-Student Ratio, γ4	0.25	1.28	0.78	0.10	2.49	0.01
Percent Non-White, γ5	-0.05	0.95	1.05	0.04	-1.52	0.13
Percent Male, γ6	-0.05	0.95	1.06	0.03	-2.09	0.04
Percent Free/Reduced Lunch, γ7	0.05	1.05	0.95	0.03	1.58	0.12
Percent Technical Programs, γ8	1.20	3.34	0.30	1.21	1.00	0.32
Percent College Credit Programs, γ9	-0.28	0.76	1.32	0.91	-0.31	0.76
Navigation 101, γ10	0.73	2.08	0.48	0.30	2.42	0.02
AVID, γ11	-0.69	0.50	1.99	0.32	-2.14	0.03
Black, β1	0.64	1.89	0.53	0.21	3.03	<.01
Hispanic, β2	-0.60	0.55	1.82	0.19	-3.18	<.01
Asian/Pacific Islander, β3	0.34	1.41	0.71	0.16	2.11	0.03
American Indian, β4	0.12	1.13	0.89	0.81	0.15	0.88
Mixed Race, β5	-0.21	0.81	1.23	0.27	-0.77	0.44
Male, β6	-0.03	0.97	1.03	0.12	-0.23	0.82
Free/Reduced Lunch, β7	-0.09	0.92	1.09	0.13	-0.64	0.52
Met English Standard, β8	0.11	1.12	0.89	0.15	0.73	0.46
Met Social Science Standard, β9	0.82	2.28	0.44	0.35	2.36	0.02
Met Science Standard, β10	0.46	1.58	0.63	0.21	2.14	0.03
Met Foreign Language Standard, β11	0.46	1.58	0.63	0.16	2.89	<.01
Met Fine Art Standard, β12	0.21	1.24	0.81	0.23	0.92	0.36
Math Level, β13	0.19	1.21	0.83	0.06	3.00	<.01
AP/IB, β14	0.42	1.52	0.66	0.15	2.79	<.01
Running Start, β15	-0.55	0.57	1.74	0.16	-3.52	<.001
GPA, β16	0.60	1.83	0.55	0.15	4.08	<.001
Failed Class, β17	-0.29	0.75	1.33	0.16	-1.84	0.07
Number of Days Present, β18	0.02	1.02	0.98	0.00	3.75	<.001
Suspended/Expelled, β19	0.01	1.01	0.99	0.17	0.03	0.97

Table 28.
School-and Student-Level Predictors of Persistence

Variable	*Coefficient*	*Odds Ratio*	*1/Odds Ratio*	*SE*	*z-value*	*Pr(>|z|)*
(Intercept), β0	-4.00	0.02	54.50		-0.81	0.42
Total Enrollment, γ1	0.00	1.00	1.00	0.00	2.14	0.03
Percent of Teachers with Master's Degrees, γ2	-0.02	0.98	1.02	0.03	-0.54	0.59
Average Teacher Experience, γ3	-0.12	0.89	1.12	0.10	-1.12	0.26
Teacher-Student Ratio, γ4	-0.05	0.95	1.05	0.17	-0.32	0.75
Percent Non-White, γ5	-0.20	0.82	1.22	0.06	-3.28	<.01
Percent Male, γ6	0.00	1.00	1.00	0.04	-0.04	0.97
Percent Free/Reduced Lunch, γ7	0.18	1.19	0.84	0.06	3.10	<.01
Percent Technical Programs, γ8	-2.27	0.10	9.66	1.86	-1.22	0.22
Percent College Credit Programs, γ9	-0.08	0.92	1.09	1.47	-0.06	0.95
Navigation 101, γ10	1.63	5.12	0.20	0.54	3.00	<.01
AVID, γ11	-1.35	0.26	3.85	0.54	-2.51	0.01
Black, β1	0.28	1.33	0.75	0.32	0.89	0.37
Hispanic, β2	-0.35	0.71	1.41	0.29	-1.18	0.24
Asian/Pacific Islander, β3	-0.78	0.46	2.19	0.23	-3.40	<.001
American Indian, β4	0.89	2.44	0.41	1.32	0.68	0.50
Mixed Race, β5	-0.32	0.73	1.37	0.41	-0.78	0.44
Male, β6	0.25	1.29	0.78	0.18	1.40	0.16
Free/Reduced Lunch, β7	0.22	1.24	0.80	0.20	1.07	0.28
Met English Standard, β8	0.55	1.73	0.58	0.26	2.10	0.04
Met Social Science Standard, β9	0.17	1.18	0.85	0.69	0.24	0.81
Met Science Standard, β10	0.99	2.70	0.37	0.56	1.79	0.07
Met Foreign Language Standard, β11	1.45	4.28	0.23	0.32	4.54	<.001
Met Fine Art Standard, β12	-0.23	0.80	1.26	0.46	-0.49	0.62
Math Level, β13	0.23	1.26	0.79	0.09	2.55	0.01
AP/IB, β14	0.55	1.73	0.58	0.22	2.48	0.01
Running Start, β15	-0.24	0.79	1.27	0.21	-1.13	0.26
GPA, β16	2.07	7.90	0.13	0.25	8.42	<.001
Failed Class, β17	-0.25	0.78	1.28	0.21	-1.20	0.23
Number of Days Present, β18	0.01	1.01	0.99	0.01	0.95	0.34
Suspended/Expelled, β19	-0.39	0.68	1.48	0.27	-1.46	0.15

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