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# THE ACHIEVEMENT CHECKUP

Tracking the Post-Elementary Outcomes of  
Baltimore Need-Based Scholarship Students

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Alex **Schuh**, Ph.D.

APRIL **2015**

**The Friedman Foundation**  
for Educational Choice  
**edchoice.org**



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## Executive Summary

This study examined the high school experiences, graduation rates and post-secondary attendance rates of students who received need-based scholarships to attend private elementary schools from the Children’s Scholarship Fund Baltimore (CSFB). CSFB provides funds to students from low-income families in the Baltimore area to attend the private or parochial schools of their choice in kindergarten to eighth grade. One of the goals of CSFB is to increase high school graduation rates and improve postsecondary education success rates of low-income students living in and near the city.

This study is significant as, to date, few studies have examined the long-term educational attainment outcomes of recipients of need-based scholarships in the elementary grades. The researchers conducted a cross-sectional survey of parents of former scholarship recipients three to eight years after they completed eighth grade, inquiring into their experiences with their elementary and high schools, the high school graduation status of their children, college attendance and/or work following high school, and the college preparation climate of their child’s high school. The researchers were unable to develop a comparison group for the Baltimore scholarship recipients, which allowed only a comparison to results of urban, low-income students in general.

High school graduation rates of the CSFB group were very high (97 percent), but consistent with the other Children’s Scholarship Fund programs that have been studied around the nation. College attendance rates of both scholarship recipients (84 percent) and their parents (53 percent) were higher than the national and Baltimore averages, as well. Although they were from economically disadvantaged homes, scholarship recipients tended to have more highly educated parents than the general population, and most parents (98 percent) held a strong desire to have their child graduate from college. Children of parents who didn’t go to college were not less likely to enroll in college, however. In fact, they were slightly more likely to go to college than children of parents who had some college (83 percent vs. 80 percent).

Recipients of the scholarships attended a wide variety of high school types, including regular public neighborhood high schools, Catholic high schools, charter schools, and secular private high schools. Those schools were generally well outfitted with college preparation resources, regardless of high school type. Scholarship recipients with strong college counseling environments in high school were more likely to enroll in college after graduation. CSFB recipients who enrolled in college five to 10 years after eighth grade had similar college preparatory environments in high school, but were more likely to take advantage of those college preparatory elements, such as SAT-preparation classes and college trips.

The author suggests that, to encourage more school choice students to enter challenging colleges, scholarship organizations should help to connect those students with more college preparatory resources and work with a wide variety of local high schools to provide more low-cost, college preparatory resources to low-income students.

## Introduction

School choice advocates have long held that providing educational options for economically disadvantaged children can help break the cycle of poverty and move them to pathways of higher learning and higher earnings.<sup>1</sup> The recent economic downturn has made it increasingly clear that each successive step of educational attainment, from high school graduation to associate's, bachelor's, and master's degrees, leads to a higher likelihood of being employed and earning a higher income.<sup>2</sup>

We know students from low-income families are far less likely to attend college than are students from middle-class or high-income families.<sup>3</sup> Students attending schools of choice have been shown to be more likely to graduate high school; however, evidence of a relationship between school choice opportunities and college attendance and college degree attainment has been more mixed.<sup>4</sup> For example, a 2012 study by Chingos and Peterson found that black students who had received need-based scholarships to attend elementary school were more likely to enroll in and attend college several years after receiving their tuition assistance than their peers who did not receive those scholarships; however, the results were not the same for students from other ethnic groups.<sup>5</sup>

In examining the educational pathways taken by students in schools of choice, it is possible some of the difference in college enrollment and success found among recipients of need-based elementary school scholarship students could be attributable to differences in the college orientation and college-going cultures of the high schools they attended. Thus, the question could be asked: To what extent are economically disadvantaged students who attend schools of choice in elementary school attending high schools with substantial college-preparation resources after eighth grade, and is there a relationship between the structure and resources of those high schools and the likelihood of those students graduating high school and attending college?

Numerous studies have demonstrated that children who attend schools with an orientation toward college preparation have higher rates of college enrollment and graduation than their peers who do not attend those types of schools.<sup>6</sup> We also know that high schools vary greatly in their orientations to college and the types of resources they provide for college preparation.<sup>7</sup> Schools with more resources dedicated to college attendance and school climates with more orientation to college are associated with higher levels of postsecondary education enrollment.<sup>8</sup> However, in an extensive review of the literature, the author of this paper found little research on the extent to which students who have received need-based scholarships in lower grades are exposed to high schools with orientations to and resources dedicated to attending college, or whether attending high schools with particular sets of resources is associated with their later enrollment in college. In this study, we attempted to address that gap by asking the following questions:

- What variety of college preparation experiences are economically disadvantaged students who participate in elementary-level private school choice programs experiencing in high school?
- What types of colleges are those students attending after high school?
- Are need-based scholarship recipients who attend high schools with relatively more college preparation resources more likely to enroll in college than those who attend high schools with fewer of those types of resources?

To investigate those questions, this study explores the relationship between economically disadvantaged students' access to private schools of their choice in elementary school and access to college preparatory services when those students progress into high school. In particular, we examined the high school graduation and college enrollment rates of economically disadvantaged students who received scholarships to attend private elementary schools in Baltimore, Maryland and the college-preparation climate of the high schools they attended.

The students who participated in this study all received scholarships from the Children’s Scholarship Fund Baltimore (CSFB), a need-based scholarship program that provides private school choice opportunities in and around the city of Baltimore. The CSF affiliates provide an unbiased choice environment for their scholarship families, as it is entirely up to the family to decide in which school they will enroll their child, and there are no selection requirements other than proof of economic disadvantage.

## Background

Providing access to college for all Americans has become a major national policy priority in recent years, particularly as the recent economic downturn has accentuated the importance of higher education to job stability. Many barriers to college access and success persist for low-income and ethnic minorities, however, creating great disparities in levels of college enrollment, persistence, and graduation. For example, 42 percent of white college-age youth attend college today, compared with only 32 percent of black youth and 23 percent of Hispanic youth.<sup>9</sup>

In a study of the types of barriers that exist for low-income and minority students, researchers in Chicago noted that despite “almost universal” college aspirations among low-income students attending the Chicago Public Schools, obstacles for those students included a lack of academic preparation for college-level work, a lack of social capital around the college admissions process (e.g., few contacts with college experience), and financial barriers, including the “declining real value of financial aid combined with rising college costs.”<sup>10</sup>

Providing those youth with such resources in high school has been shown to improve their access to and persistence in college, particularly when it comes in the form of an accessible college preparatory curriculum, college entrance exam preparation, and college admissions counseling.<sup>11</sup> Researchers explored these connections in a large-scale study of public school choice in North Carolina’s Charlotte Mecklenburg

School District. Deming and colleagues found that winning a high school lottery in that district generated increased high school graduation rates and four-year college attendance and persistence, particularly for females and for those students who would otherwise have attended “low-performing” neighborhood schools; however, little difference was seen for those who would otherwise have attended “better resourced, more high-performing” neighborhood schools. They attributed that to differences in access to more “cultural capital” around college attendance in the choice schools, which included: insistence on earning more credits in math, availability of college counselors, college admissions test preparation, better academic instruction, and association with peers who are more college-oriented.<sup>12</sup>

A national survey of school counselors identified a school’s overall college-going climate as a significant predictor of whether students apply to college.<sup>13</sup> This climate is characterized by teachers and other school personnel who talk about college, push students to apply, and ensure their applications are completed. Further support for the college-going climate theory is provided by McDonough, who argues that high school counselors are by far the most important professionals in improving college enrollments.<sup>14</sup> Similarly, in an analysis of data from the National Educational Longitudinal Study of 2002, Bryan and colleagues found that, overall, the more contact students had with a counselor who could provide information about colleges, the more likely they were to apply, especially for those who saw their counselor in 10th grade or earlier.<sup>15</sup>

Although they are a key piece of the college access puzzle for low-income students in particular, Bruce and Bridgeland found that many other factors are also necessary, as counselors are often inadequately trained, get pulled away to do other tasks, and in many cases are not held accountable for providing college counseling by their administrators.<sup>16</sup> That is particularly true of counselors serving predominantly low-income and traditionally underrepresented students.

Indeed, Corwin, Venegas, Oliverez, and Colyar found



that counselors in schools with more black students do not have as many resources for college planning and preparation compared with schools composed of predominantly white students.<sup>17</sup> “Black” schools are less likely to have an emphasis on college access, and their student-counselor ratios are higher. In some schools serving large numbers of poor and minority students, the counselor-to-student ratio is upwards of 1:1000, and little time is spent on college counseling. Rather, they are busy scheduling, testing, providing lunch supervision, and dealing with discipline and other immediate concerns like pregnancy, suicide prevention, drug use, and personal crisis counseling. By contrast, in private college-preparatory schools that send a majority of graduates to college, there are usually counselors and other staff devoted exclusively to college guidance.<sup>18</sup>

Real differences in opportunities for college counseling, then, are seen between schools serving predominately white and predominately students of color, as well as between schools serving economically-advantaged versus economically-disadvantaged students.<sup>19</sup> Such differences in social capital in schools can amplify differences in college-going opportunity related to social capital outside of schools (e.g., parent education level, family experiences with college, family income level).

A school culture that supports an understanding of the financial aspect of college is particularly important for low-income students in their pursuit of college. Bruce and Bridgeland found that among students who had been accepted to four-year institutions, students who had completed a FAFSA in the spring were 50 percent more likely to enroll than those who did not.<sup>20</sup> Nagaoka and colleagues found that relatively few low-income students and families understand the admission process, including financial aid, suggesting a great need for more counseling and application assistance for low-income students, especially around financial aid.<sup>21</sup>

Another area of weakness of some high schools that can adversely affect low-income students is college admissions test preparation. College admissions tests

are still used widely as screens for college acceptance, particularly by selective four-year colleges. Some have argued that more economically advantaged students have an edge on their disadvantaged peers when it comes to college admissions tests. For example, students who can afford to pay for expensive admissions test classes and who take it multiple times can improve their scores. An entire industry has grown up around preparing students to take tests like the SAT and ACT.

Although almost one quarter of SAT takers obtained fee waivers through the College Board to take the SAT (indicating financial need) and almost half of SAT takers were minority students, higher-income students were significantly more likely to take the test multiple times, a strategy the College Board concedes improves scores. Vigdor and Clotfelter posit that low-income students may be at a disadvantage in the college admissions process as a result of taking the test only one time, and with relatively little direct preparation.<sup>22</sup> In addition, several reviews of SAT preparation coursework and coaching have found that formal preparation results in increased scores, with coaching, the most expensive form of preparation, having the highest impact.<sup>23</sup> Therefore, low-income students who have fewer opportunities to take the tests and fewer opportunities for college admissions test preparation are doubly disadvantaged relative to their more economically advantaged peers.

Relatively few studies have examined the impact of participation in a need-based scholarship program—privately or government funded—on educational attainment of low-income scholarship or voucher recipients. This is likely due in part to the fact large-scale programs to fund economically disadvantaged students to attend private schools of choice are relatively new, and relatively few participants have reached the age where they could be expected to be enrolled in or to have completed college, particularly those who received those funds to attend elementary school. Also, the cost of finding students and their parents and obtaining information from them up to 14 years after they have received a scholarship can be prohibitively expensive.

For example, the cost of the short-term evaluation of the Washington, D.C. Opportunity Scholarship Program, was \$1 million. Despite the cost and other logistical difficulties, several notable studies have been conducted that have linked receipt of a scholarship with higher educational attainment. Wolf and colleagues, for example, used a randomized experimental design to demonstrate that D.C. Opportunity Scholarship recipients from low-income families were at least 12 percent more likely to graduate from high school than their peers who applied for but did not receive the scholarship.<sup>24</sup> Cowen and colleagues found similar high school graduation results for voucher recipients in Milwaukee.<sup>25</sup> Although those studies found differential rates of high school graduation, and in the case of Cowen’s study, college enrollment, they did not examine what accounted for the differences in high school or college attainments. Both Wolf’s group and Cowen’s group speculated that the differences in graduation and college enrollment rates between and within groups could be the result of differences in high school cultures attended by the scholarship and voucher recipients. That idea is supported in the case of Milwaukee in qualitative research by Stewart and colleagues.<sup>26</sup>

Given that access to college-preparatory resources and college-focused high school environments have been shown to make a difference in college enrollment and persistence, and that access to those resources can be particularly limited for low-income students, this study explores the extent to which economically disadvantaged students who received tuition subsidies to attend private schools attended high schools with college-preparatory services and resources, and the extent to which students with higher levels of those services and resources in their high schools attended college after high school.

## About Children’s Scholarship Fund Baltimore

The subjects of this study were all students who received scholarships from the Children’s Scholarship Fund Baltimore (CSFB) for at least two years and up to nine years.

CSFB provides partial tuition assistance for low-income parents to send their children to the private schools of their choice, without regard to race, ethnicity, academic qualifications, or religious belief. CSFB is affiliated with the national Children’s Scholarship Fund (CSF), a nonprofit organization providing educational opportunities to low-income children across the country. Nationally, CSF has provided scholarships to more than 123,000 low-income families. CSFB has provided scholarships to more than 6,000 students in kindergarten through eighth grade to attend private schools in and around Baltimore.

Recipients of scholarships are selected by random lottery. Scholarships are provided in amounts up to \$2,000 per student, and families must provide at least \$500 toward tuition each year. Upon completing eighth grade, CSF recipients, including those subsidized by CSFB, leave the program and become CSF “alumni.” As the scholarship recipients progress into high school, they have traditionally had little contact with the program other than to update their status, which happened infrequently (e.g., in high school, out of high school, etc.). CSF believes that by boosting academic success and student engagement in and attendance at school prior to entering high school, scholarship recipients will have a strong enough foundation to overcome barriers that can lead economically challenged students to drop out before completing school. Evidence from a recent study of Baltimore’s high school students that the types of factors CSF has identified as important—attendance in eighth and ninth grades, and grade point average and academic test scores in eighth and ninth grade—are highly correlated to high school graduation and dropout rates. Mac Iver and Messel’s study also found those factors were important predictors of two-year and four-year college enrollment.<sup>27</sup>

## Research Methods

This study employed a cross-sectional “snapshot” survey that attempted to identify the successes and pathways—to high school, college, and beyond—of former scholarship recipients (CSFB alumni). A

questionnaire was developed with input from the CSFB staff and board, and distributed to CSFB alumni by mail (paper), online, and in telephone form to all of the CSFB alumni or parents of alumni whose contact information could be obtained and verified. Contact information was provided to the researchers conducting the study at FRONTIER 21 Education Solutions by CSFB staff members. The survey requested information about:

- the name of the respondent’s high school,
- the date of high school graduation (if graduated),
- high school academic record,
- college counseling environment in high school,
- college preparation environment in high school,
- access to college admissions test preparation,
- college financial aid support,
- college attended, if any,
- college enrollment/graduation status,
- opinions about the supportiveness of the CSFB program, and
- opinions about the quality of the high school environment overall.

Through the following questions, surveyed scholarship recipients were asked about their high school experiences, graduation status, and college attendance or work status and about the availability of supports for college access and enrollment in their high school:

- Does having scholarship support that allows an economically disadvantaged family to place a student in a private elementary school of their choice facilitate that student’s success in high school, culminating in high school graduation

and/or enrollment in college? Or, are the outcomes more similar to regular Baltimore public school students?

- What types of supports for college attendance and success are these scholarship recipients being provided in high school? Is there significant variation seen between high schools attended by scholarship recipients, or are they similar in those areas?
- Is there a relationship between the availability of high school supports for college attendance and scholarship recipients’ access to and enrollment in college? Or, does no clear relationship exist between those supports and college enrollment?

By asking those questions, this study attempts to add to the current understanding of the relationship between receiving a need-based scholarship to attend a private school and access to college-preparation services, and the relationship between the availability of those services and the ultimate enrollment or non-enrollment of those students in college. As Wolf and colleagues have pointed out, there have been very few studies that have explored those connections, despite overwhelming evidence that improving both high school graduation and college enrollment for economically disadvantaged students can add significant value to individual success and to the collective economy.<sup>28</sup>

The author gathered data on CSFB recipients using a combination of survey forms administered over the summer of 2013. Other publicly available information was also used, including information from Baltimore-area high schools. The majority of information was collected through the mail survey. Data collected were both qualitative, such as opinions about the CSFB program, for example, and quantitative, such as rankings of the importance of high school graduation to the recipient’s parents. The tracking study focused on scholarship recipients who had received at least one year of scholarship support from CSFB and who had completed eighth grade between the spring of 2004 and the spring of 2010. Those alumni would have

had the opportunity to graduate with their four-year cohort in the high school classes of 2008, 2009, 2010, 2011, 2012, and 2013, or graduate early in three years, by 2013 (class of 2014). No clear comparison group could be developed for the CSFB recipients, primarily because the organization did not keep track of students who applied for but did not receive scholarships.

Also, the primary purpose of this study was to examine the experiences of the scholarship recipients once they left the program and advanced to high school and beyond, and not to compare the scholarship recipients with similar students who did not receive a scholarship. This study is therefore more qualitative in nature, describing the experiences of scholarship recipients as they progressed past eighth grade and attempting to identify factors that may be associated with a student progressing beyond graduation and into college. Because the program had no control over the types of high schools that parents and students chose, or even the type of elementary school they chose, there is no way to eliminate the possibility that parent and student school-selection factors are more important, or equally important, to college enrollment, as the types of college-preparation environment and activities provided by particular high schools.

The researchers developed a contact database of students and parents who had received CSFB

scholarships in the past. As the database was being constructed, it became clear some contact information was outdated by several years, as the program did not have a directive of maintaining contact with the alumni after eighth grade. Of the 3,670 scholarships distributed to CSFB parents to support their children in grades K-8 from 2003 to 2010, CSFB provided information for 322 students who had received a scholarship in eighth grade. The distribution of those alumni, according to their eighth-grade year and four-year high school graduation year, is provided in Table 1.

A large number of the postal addresses, phone numbers, and email addresses were not reachable, even after several attempts to find alternate contact information. The number of students for whom contact information was determined to be unattainable is also provided in Table 1. As the table shows, only 63 percent of alumni had potentially useable contact information (e.g., they did not have mail returned as “no forwarding address” and their phone numbers or email addresses were not obviously incorrect or disconnected). Given the fact all of the scholarship recipients were required to demonstrate economic hardship at the time of the scholarship, it is not surprising this highly mobile population could not be reached several years later. The researchers have found this same pattern of contact difficulties in studies of other scholarship programs

**TABLE 1** CSFB Recipients in Eighth Grade, by Scholarship Year, and Number/Percentage with Potentially Viable Contact Information

Eighth Grade Scholarship Year	Four-Year High School Graduation Class	Number Total	Number Reachable	Percentage Reachable of Total	Number Responding	Percentage Responding of Reachable
2003-04	2008	17	8	47%	4	38%
2004-05	2009	31	18	58%	6	33%
2005-06	2010	31	21	68%	11	52%
2006-07	2011	50	36	72%	22	61%
2007-08	2012	76	48	63%	29	60%
2008-09	2013	62	38	61%	36	95%
2009-10	2014	55	34	62%	28	82%
<b>Total</b>		<b>322</b>	<b>203</b>	<b>63%</b>	<b>136</b>	<b>67%</b>



in Charlotte, Philadelphia, and Toledo. Indeed, many recipients of CSF scholarships change addresses and phone numbers frequently while receiving their scholarships (personal communication through the Children’s Scholarship Fund Philadelphia).

Of the 322 alumni who received eighth-grade scholarships from 2003 to 2010, 203 (63 percent) were found to have potentially reachable contact information, and of those, 136 (67 percent) responded to the survey. In general, more recent eighth-grade graduates were more likely to respond or have their parents respond to the survey (from 33 percent of 2004-05 eighth graders to 95 percent of 2009-10 eighth graders).

The average number of participation years for CSFB parents of the alumni surveyed for this study was six years, with a range of two years to nine years of scholarships provided for each child. The parents or guardians of the alumni were the primary target of the survey, as they were thought to have the most information about their child’s educational pathways and perspective on the quality of college preparatory services offered by their child’s high school. Whenever possible then, the researchers attempted to obtain information from the parents or guardians of the CSFB alumni. If the parents were not reachable, information was obtained from the alumni directly. This research method contains the possibility of bias as it relies on self-reporting, which could lead to some underreporting of negative consequences (such as a scholarship recipient not completing high school, for example). Also, the families with more stable contact information could be more likely to be more stable financially, which would be associated with higher rates of high school graduation, as well. However, when additional efforts were made to find families with long-outdated contact information, those with outdated addresses were very similar in their outcomes and responses to those with current contact information. An examination of the records of students and parents versus those who were not reachable did not indicate any particular difference between the two groups. Therefore, it is unlikely the group that was not contacted differs in any substantial way from those who were contacted.

## Findings

### High School Graduation and College Enrollment

One of the express goals of the Children’s Scholarship Fund is to provide educational opportunities that are likely to boost success in high school leading to graduation. According to the CSF, a high school graduate’s “annual income will be double that of a dropout, and his [sic] chances of being incarcerated, suffering from poor health, and even premature death will be greatly decreased.”<sup>29</sup>

The issue is a serious one for low-income urban students, around only 50 percent of whom graduate from large metropolitan school systems. Baltimore has been identified as one of the lowest-achieving school systems in the country in terms of high school graduation, with one study placing it among the bottom three nationwide, with only a 38.5 percent graduation rate.<sup>30</sup> More recent calculations estimate 64 percent of the city’s ninth graders graduate in four years (four years after ninth-grade entry is the widely adopted national standard), which is partially attributable to targeted efforts to provide alternative high school programs that are smaller and more attentive to student needs.<sup>31</sup>

The survey of the parents and guardians of CSFB alumni asked for high school graduation status at the time of the survey—at least four years after initial ninth-grade enrollment for the classes of 2008 to 2013. Through a combination of survey and school data, the author was able to verify that 109 of 112 (97 percent) CSFB alumni eligible for graduation by the summer of 2013 had in fact graduated. That percentage is consistent with high school graduation rates of CSF recipients that FRONTIER 21 has tracked in other large cities, including Charlotte (97 percent), Toledo (98 percent) and Philadelphia (96 percent).<sup>32</sup> Three students of the 112 (3 percent) had either dropped out of high school or were still working toward completing a high school degree. Based on the sample size of 112 out of 267 total alumni in the target cohorts, it is very likely the true high school graduation rate of CSFB recipients is

between 99 percent and 95 percent (with a 99 percent confidence level, assuming nonrespondents were excluded due to random factors). NCES has identified Maryland as a state with “on-time” graduation rates above the national average—84 percent compared with 80 percent nationally in the 2011-12 school year. The Baltimore Public School graduation rate, however, has been calculated to be at least 17 percent lower than the Maryland average in recent years.<sup>33</sup>

As Table 2 shows, 18 percent of the CSFB alumni graduated high school in fewer than four years after eighth grade. That is much higher than the percentage of high school students nationally estimated to graduate in fewer than four years—approximately 2.9 percent.<sup>34</sup> Statistics on early graduation from high school are difficult to locate, as the primary metric currently used for policy decisions has been graduation “within four years” of enrollment in ninth grade. Recently, many states and school districts have been providing additional avenues and incentives for students to graduate in fewer than four years, partly as a cost-saving measure, with 24 states having formal policies in place for the 2013-14 school year, including Maryland.<sup>35</sup> One potential reason for the higher early graduation rate found in CSFB is the financial pressure on the families to spend fewer years in private high schools, which the majority of CSFB recipients

attend (see Table 2). A brief review of research in the area could not identify any particular factors, which prompt students to graduate from high school early. More research in this area could be beneficial, as the push for early high school graduation increases across the country.

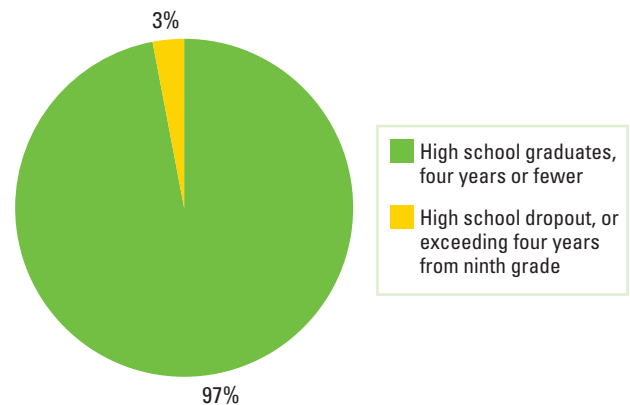
Of the three scholarship recipients who had not graduated four years after beginning high school (3 percent), one was still in school as a senior, one had dropped out of school, and one was studying to complete his GED. Of those who had not graduated “on time,” two attended traditional Baltimore public high schools, and one attended a small, private religious school.

The survey also sought the percentage of CSFB alumni who had ever enrolled in college five to nine years after completing their final scholarship year in eighth grade. The National Center for Education Statistics has found that high school graduates from low-income families are far less likely to enroll in college than their more advantaged peers.<sup>36</sup> Recent studies conducted by the Baltimore Education Research Consortium (BERC) found that Baltimore’s public high school graduates enrolled in two- and four-year colleges at a rate that is slightly below the national rate for low-income students, between 44 percent and 61 percent.<sup>37</sup> A study

**TABLE 2** CSFB Recipient High School Graduation Rates, Classes of 2008 to 2013, (“Ahead (Three Years),” “On Time (Four Years),” “Behind (Five or More Years),” Dropped Out)

Recipient Status	Graduated	Percentage
Graduated three years post-eighth grade	20 of 112	18%
Graduated four years post-eighth grade	89 of 112	79%
Graduated five or more years post-eighth grade	0 of 112	0%
Still in school/GED program	2 of 112	2%
Dropped out	1 of 112	1%
<b>High school graduation rate five or more years</b>	<b>109 of 112</b>	<b>97%</b>

**FIGURE 1** Among CSFB Recipients, Percentage of High School Four-Year Graduates, Classes of 2008 to 2013



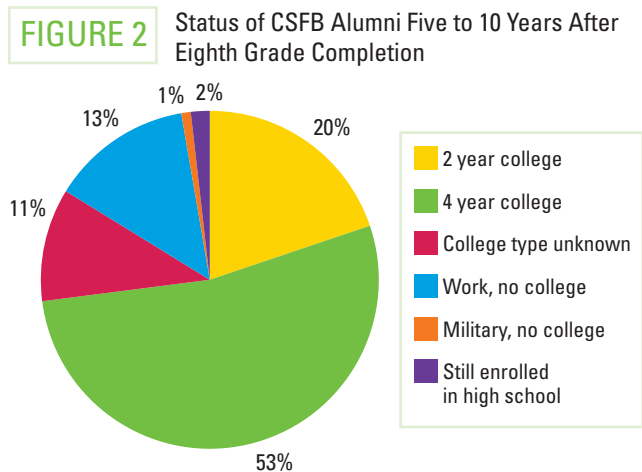
by the Center for Social Organization of Schools (CSOS) followed Baltimore’s public school ninth graders and found that an average of 32 percent of the two ninth-grade classes (classes of 2009 and 2010) had ever enrolled in college within five years after ninth grade.<sup>38</sup>

The CSFB alumni survey found CSFB scholarship recipients were enrolled in college at a higher rate than either the Baltimore City Public School (BCPS) ninth graders or the BCPS high school graduates who were tracked in the BERC and CSOS studies, respectively. As Figure 2 indicates, 84 percent of CSFB alumni were enrolled in some type of college five to 10 years after completing eighth grade, 2 percent were still in high school, 1 percent entered the military, and 14 percent did not attend college immediately after graduation. Table 3 provides the data from Figure 2. In some cases, the survey responders indicated the CSFB alumni had at some point been enrolled in either a two- or four-year college but did not indicate which type. Of those for whom college type was indicated (N=81), 73 percent were enrolled in four-year colleges, and 27 percent were enrolled in two-year colleges (community colleges). By comparison, in the CSOS study, 53 percent were found to be enrolled in four-year colleges (e.g., bachelor’s degree-granting institutions) and 47 percent were found to be enrolled in two-year colleges (e.g., associate’s degree-only institutions).<sup>39</sup>

Overall, CSFB alumni were found to have enrolled in 53 different colleges and universities, including a large number in seminaries in Israel, following high school graduation. The college attended most frequently by CSFB alumni was Baltimore City Community College (7 percent of all alumni), with Community College of Baltimore County being the second most frequently attended (5 percent of all alumni).

The findings on college enrollment of the CSFB scholarship recipients support Matthew Chingos and Paul Peterson’s recent findings from their study of similar students in New York; it found that offers of private school scholarships (vouchers) increased enrollments of some low-income students in college when compared with students who were not offered scholarships. In some groups, scholarship recipients attended four-year colleges at higher rates than similar peers who did not receive those scholarships.<sup>40</sup>

The effect of the scholarships on college enrollment from this Baltimore study appear to be much higher than those that were found in New York by Chingos and Peterson, although the New York study is not directly comparable as it used different methodologies. The higher college enrollment results in Baltimore might have been caused, in part, by the nature of the students and families receiving the scholarships, and



**TABLE 3** CSFB Alumni College Enrollment, Work, Military, and High School Enrollment Status Five to 10 Years Post-Eighth Grade

Alumni Status Five or More Years Post-Eighth Grade	Percentage
Two-year college	20%
Four-year college	53%
College type unknown	11%
Work, no college	14%
Military, no college	1%
Still enrolled in high school	2%
<b>Total</b>	<b>100%</b>
Ever enrolled in college	84%

by the types of high schools those families chose for their children. Table 4 provides the percentages of CSFB alumni attending different types of high schools.

The 112 alumni attended a wide variety of schools—61 different high schools, primarily in the Baltimore area. As the Table 4 shows, the CSFB scholarship students were very likely to attend Jewish schools—for the most part schools focusing on Orthodox Judaism—with 42 percent of students attending those schools. Approximately one-fifth of the students attended public magnet schools (19 percent), which require students to apply and be accepted before they can attend. Only 16 percent attended a regular public school, usually in the Baltimore City Public Schools system.

Chingos and Peterson theorize that a combination of home characteristics/demographics and school characteristics are likely responsible for the increase in high school completion and college enrollment for the students in New York.<sup>41</sup> According to a Pew study of educational attainment among members of different religious groups in America, Jewish residents have the second highest rate of college completion at 59 percent (only Hindus are higher, with 74 percent), more than double the national average.<sup>42</sup> The particularly high level of participation among Jewish

families in CSFB undoubtedly has had an impact on the high school completion and college enrollment levels of the program’s alumni. Jewish students are overrepresented in the CSFB scholarship population by around 350 percent relative to their presence in the Baltimore population at around 12 percent. Because the scholarships are allotted by lottery, this is a result primarily of the fact Jewish families apply to CSFB in larger numbers than members of other ethnic groups.<sup>43</sup>

The presence of “social capital” in large amounts, such as a high rate of parental college attendance, among the Jewish population in Baltimore might explain some of the elevated outcomes among the CSFB alumni, although non-Jewish students also graduated in very high numbers. Both family background and high school characteristics were examined in this study to assess the potential link between those two major elements of social capital and enrollment in college by CSFB alumni.<sup>44</sup>

### Social Capital Among CSFB Alumni – Families and High Schools

The term “social capital” has been employed to describe access to resources some students have that enable them to move past potential barriers beyond the provisions of “financial capital.”<sup>45</sup> The fact that students from similar economic backgrounds can have very different academic outcomes has been explained in part by the types of resources those students may have available at home, at school, or both—e.g., parental education levels, access to college-oriented school counselors, participation in a college-oriented high school, etc.<sup>46</sup>

Although all of the students in the CSFB alumni population came from economically distressed households, their family backgrounds and high school resources showed a great deal of variation. It should be noted here that this study was not an attempt to prove scientifically what factors directly relate to higher levels of high school attendance or college enrollment. Rather, it was designed to be a “first level” study to identify the types of variations in social capital that

**TABLE 4** Types of High Schools Attended by CSFB Alumni (High School Classes of 2008 to 2013)

School Type	Percentage
Catholic	14%
Christian (Non-Catholic)	3%
Charter	1%
Homeschool	2%
Jewish	42%
Private Non-Religious	3%
Public	16%
Public Magnet	19%
<b>Total</b>	<b>100%</b>



**TABLE 5** College Attendance or Graduation Status Among Parents of CSFB Alumni

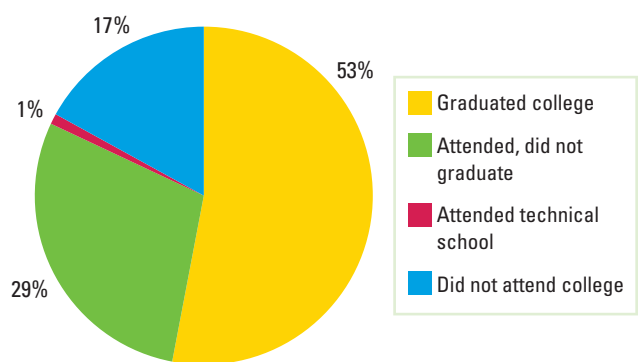
College Attendance/ Graduation	Percentage
Graduated college	53%
Attended, did not graduate	29%
Attended technical school	1%
Did not attend	17%
<b>Total</b>	<b>100%</b>

were available to the CSFB scholarship recipients while in high school, and to obtain parental reflections on how having a scholarship in elementary school may or may not have contributed to their child’s academic success in high school and beyond.

It has been widely recognized that having at least one parent who attended college dramatically increases the chances a high school student will enroll in college.<sup>47</sup> Hossler and Maple found that parental education levels have a stronger association with college attendance than family income level.<sup>48</sup> The CSFB alumni survey asked parents of those students to describe their own post-high school education backgrounds. The parents’ responses are provided in Table 5; it shows that 82 percent of the CSFB alumni had at least one parent who attended a two- or four-year college. That percentage resembles very closely the percentage of CSFB alumni who had attended college five to 10 years after eighth grade (84 percent).

Despite their distressed economic backgrounds, the CSFB alumni had parents with much higher college attendance rates and graduation rates than their peers nationally and their peers in Baltimore. Nationally, 55 percent of adults have some college, and 36 percent hold an associate’s degree or higher.<sup>49</sup> However, Table 6 shows there was little correlation between parental educational level and whether a CSFB scholarship recipient graduated on time, attended college, or chose to work after high school. In fact, children of parents who did not go to college were slightly more

**FIGURE 3** Post-High School Education Levels of CSFB Alumni (Two- or Four-Year College)



**TABLE 6** Relationship Between Parental Education Level and CSFB Alumni College Enrollment

Alumni College Status	Parent No College	Parent Some College No Degree	Parent Graduated College
Child still in high school, dropout	0%	0%	5%
Child working	17%	20%	5%
Child enrolled in college	83%	80%	89%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

likely to enroll in college than children of parents who attended college but did not graduate (83 percent vs. 80 percent). The difference is small, but it does indicate there are likely other factors at work in addition to the educational attainment level of the scholarship recipients’ parents.

Strong associations have been found by other researchers between the level of a parent’s higher education attainment (e.g., no college, some college, associate’s degree, bachelor’s degree) and the level of college degree their children pursue.<sup>50</sup> Table 7 summarizes the association between CSFB alumni’s parents’ higher education experience (no college, some college but no degree, and college degree) and

whether or not their child attended a two- or four-year college after high school. That type of association is important to understand, as associate’s degree recipients generally have a much lower earning power than those with bachelor’s degrees.<sup>51</sup>

Table 7 and Figure 4 show little association between whether a parent had some college vs. no college and whether or not their child enrolled in a two- or four-year college. CSFB alumni whose parents had no college were slightly more likely to enroll in a four-year college than those who had attended some college but did not receive a degree (56 percent and 46 percent, respectively). However, there was a high degree of association between whether a parent earned a college degree and their child’s enrollment in four-year college, with 88 percent of CSFB alumni who had a parent with a college degree enrolled in a four-year college vs. 12 percent of those students who had enrolled in a two-year college. Alumni with at least one

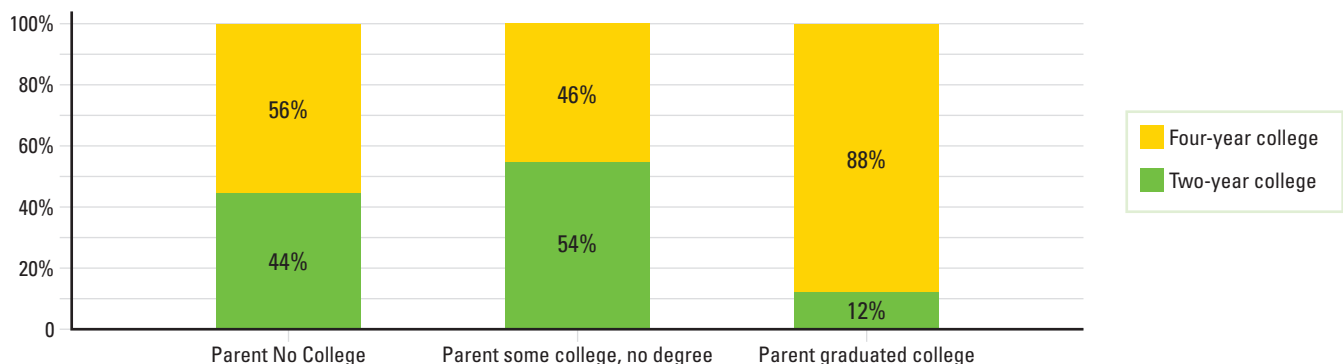
parent who graduated from college (two- or four-year) were much more likely to enroll in a four-year college than a two-year college (e.g., Towson University vs. Community College of Baltimore County).

The value that parents place on their child’s educational achievement is highly correlated to their child’s educational accomplishments in high school and post-high school.<sup>52</sup> CSFB alumni were asked to state the importance they attached to their child attending college, from “Not very important” to “Very important.” As Table 8 shows, 77 percent of parents surveyed stated it was “very important” for their child to attend college, 21 percent that it was “somewhat important,” and only 2 percent said it was “not very important.” Comparing parents’ opinions to the alumni experiences five or more years after ninth grade, 77 percent of those whose child attended college stated it was very important to them and 2 percent said it was not very important. Of those whose child entered the military or went directly to work, 80 percent said it was very important to them, and 10 percent responded it was not very important. Of those whose child dropped out, 50 percent stated their child’s college attendance was very important to them, and none said it was not very important. No substantial patterns could be identified between a parent’s desire for the CSFB scholarship child to go to college and whether or not they went to college, worked, stayed in high school, or dropped out of high school five or more years after ninth grade.

**TABLE 7** Relationship Between Parental Education Level and CSFB Alumni Attendance at Two- or Four-Year College

Alumni Two- or Four-Year College	Parent No College	Parent Some College No Degree	Parent Graduated College
Two-Year College	44%	54%	12%
Four-Year College	56%	46%	88%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**FIGURE 4** CSFB Alumni College Enrollment in Two- or Four-Year College Compared With Parental Higher Education Level



**TABLE 8** Importance of Child Attending College to CSFB Parent, with Child’s Post-High School Activity

Importance of child attending college	%	College	Work/Military	High School, Dropout
Not very important	2%	2%	10%	0%
Somewhat important	21%	21%	10%	50%
Very important	77%	77%	80%	50%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Overall, parents’ educational aspirations for their CSFB scholarship recipient children were very high. As Dubow, Boxer, and Huesmann point out, a number of factors are involved that mediate the relationship between a child’s educational outcomes and a parent’s educational aspirations, such as family poverty levels and the child’s intellectual talents.<sup>53</sup>

A student’s grade point average and academic record has been shown to be predictive of later college enrollment as early as eighth grade.<sup>54</sup> The CSFB alumni fit that pattern, as those with higher grades (e.g., mostly A grades) in high school were much more likely than those with lower grades (e.g., mostly Bs and Cs) to be enrolled in college five to 10 years after high school. As Table 9 indicates, 97 percent of students identified as having mostly A grades enrolled in college, compared with 88 percent of those with mostly Bs, and 64 percent of those with mostly Cs. All of the Alumni who did not graduate high school four years after entering ninth grade (100 percent, three alumni) had an academic record of “mostly Cs.” Having lower grades was closely associated with attendance at public schools, as 73 percent of those with mostly Cs attended some form of public school (traditional

public, public magnet or charter), compared with 19 percent of those with mostly Bs, and only 14 percent of those with mostly A grades. Overall, 39 percent of the CSFB alumni were reported to have mostly A grades, 43 percent had mostly Bs, and 19 percent had mostly Cs, with none having mostly Ds or Fs. This represents an approximate average GPA of 2.7, which is slightly lower than the national average of approximately 3.0.<sup>55</sup>

### College Preparatory Environments of CSFB Scholarship Recipients’ High Schools

As was noted previously, 112 CSFB alumni were reported as attending 61 different high schools of all types, including private non-religious, private religious, Catholic, regular public, charter, and public magnet schools. Of those schools, 22 had two or more CSFB alumni attend, while the majority of schools had only one attend. In these 61 high schools, the CSFB alumni experienced a wide variety of college preparation services and resources. Respondents to the survey described the extent to which college counseling was offered by the high schools, the college admissions test preparation offered, if any, the college trips and fairs that were offered, if any, and the parents’ opinions of the college preparation environment provided by the schools.

Table 10 offers the perspective of CSFB alumni parents on the college counseling environment in their child’s high school. It should be noted that a substantial number of parents (5 percent to 19 percent) indicated

**TABLE 9** College Enrollment of CSFB Alumni by High School Academic Record\*

	Mostly A Grades	Mostly B Grades	Mostly C Grades
College Enrollment Percentage	97%	88%	64%

\* N=75

**TABLE 10** College Counseling Provided in High School to CSFB Alumni and Their Parents

Parent Response	Child's high school offered college counseling	If offered, parent felt college counseling was helpful	College counselor was on staff at the high school	College financial planning was offered by high school
Yes	79%	91%	74%	55%
No	21%	9%	26%	45%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

they did not know if a particular kind of college counseling or resource was offered at their child’s school. The responses are from parents who were aware of their child’s college counseling experiences in high school.

Table 10 shows that 79 percent of parents of CSFB alumni stated that their child’s school offered college counseling and 74 percent of the alumni had a college counselor on staff at their school. Of those whose high school offered college counseling, 91 percent said the counseling was helpful to their child. Only 55 percent stated that college financial planning was offered by the high school. This is particularly important, because one of the primary barriers to low-income students applying to colleges, particularly four-year colleges, is a lack of understanding on how to complete college financial aid forms.<sup>56</sup> Even when a high school student does have a counselor available, many counselors are not trained in how to provide college financial counseling to parents or students.<sup>57</sup>

College information sessions and college trips can improve parents’ and students’ understanding of the culture of college, and what types of college

opportunities are available to them. Education researchers Caroline Hoxby and Christopher Avery have found that many academically high-achieving students from low-income families apply to schools where the average achievement level is well below their ability level, partly because their access to information about more selective schools is very limited.<sup>58</sup> At CSFB alumni high schools (see Table 11), three-fourths of the alumni (75 percent) had college information sessions or fairs provided to them. However, fewer than half (47 percent) attended schools that provided actual trips to colleges (despite being in the neighborhood of many two- and four-year colleges). Overall, only 38 percent of the CSFB students attended a high school-sponsored college trip.

The majority of four-year colleges in the U.S. require an admissions test score as part of the application.<sup>59</sup> A strong score on an admissions test, such as the ACT or SAT, opens more possibilities for admission to more selective colleges and universities. The two most promising ways that have been demonstrated to increase admissions test scores are retaking the test and participating in admissions test preparation classes and coaching. Unfortunately, students from

**TABLE 11** College Information Sessions and College Trips Provided in High School to CSFB Alumni and Their Parents

Parent Response	High school has college information sessions/fairs	High school takes students on college trips	Child attended a high school-sponsored college trip
Yes	75%	47%	38%
No	25%	53%	62%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**TABLE 12** College Admissions Test Preparation Provided to CSFB Alumni by Their High School

Parent Response	High school offered college test preparation (SAT, ACT, etc.)	College test preparation was offered by high school for free	Child took college test preparation classes
Yes	86%	60%	47%
No	14%	40%	53%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

low-income families are less likely than their more affluent peers to take admission tests more than once, and less likely to participate in test preparation classes.<sup>60</sup> As Table 12 shows, 86 percent of CSFB alumni attended a high school where college test preparation was provided by the school. However, of those 86 percent, only 60 percent attended high schools where those classes were free. Less than half of CSFB alumni—only 47 percent—took college test preparation classes of any kind.<sup>61</sup> Without such test preparation, economically disadvantaged students are less likely to apply to or attend a school that matches their academic achievement levels.<sup>62</sup>

Table 13 compares college preparation characteristics of CSFB alumni high schools among those who enrolled in college after high school with those who did not. It

shows the college preparatory characteristics of those who enrolled in college and those who did not were similar, but alumni who enrolled in college actually had fewer opportunities for college preparation available in several key categories. College enrollees had less counseling available than those who did not enroll in college (77 percent vs. 90 percent), less opportunity to attend college fairs or college trips, and fewer opportunities for free admissions test preparation (58 percent vs. 71 percent). However, college enrollees were more likely to have access to helpful college counseling when it was available (94 percent vs. 80 percent), more likely to attend school-sponsored college trips, more likely to attend a high school that offered admissions test preparation (e.g., SAT and ACT), more likely to take a test preparation class, and more likely to attend a school that offered

**TABLE 13** College Preparation Available to CSFB Alumni in Their High School

High School College Preparation Characteristic	Alumni Not Enrolled in College	Alumni Enrolled in College
Child's high school offered college counseling	90%	77%
If offered, parent felt college counseling was helpful	80%	94%
College counselor was on staff at the high school	80%	73%
High school has college information sessions/fairs	86%	74%
High school takes students on college trips	50%	47%
Child attended a high school-sponsored college trip	33%	39%
High school offered college test preparation (SAT, ACT, etc.)	80%	87%
College test preparation was offered by high school for free	71%	58%
Child took college test preparation classes	44%	47%
College financial planning was offered by high school	43%	56%

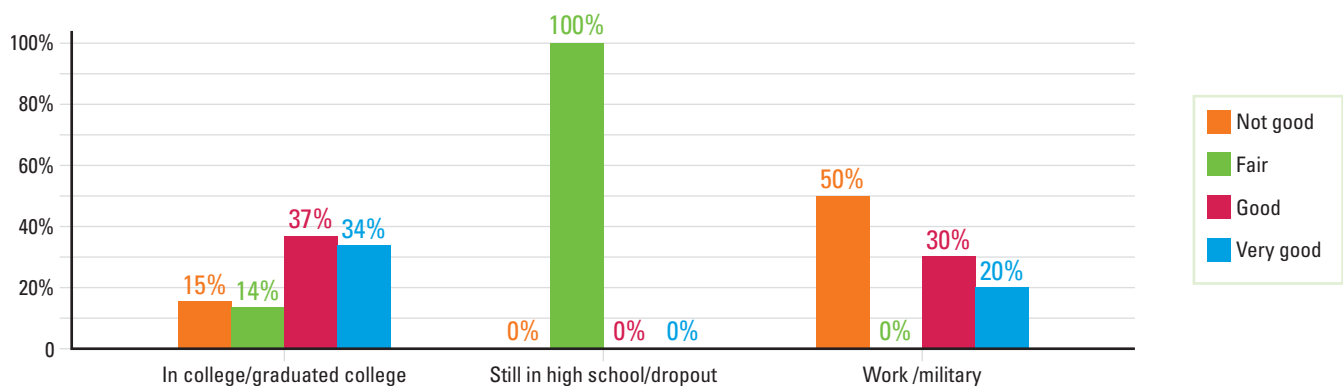
college financial planning (56 percent vs. 43 percent). Overall, the students who ultimately enrolled in college attended schools with slightly more college admissions test preparation and financial counseling offered, and were more likely to take advantage of college preparation activities when they were offered.

Parents of CSFB alumni were asked to provide their opinion about the overall college counseling environment of their child’s high school. As Table 14 shows, only 31 percent of parents responded that their child’s high school college counseling environment was “very good,” 35 percent said it was “good,” 19 percent that it was “fair,” and 15 percent that it was “not good at all.” Of those whose child went to college within five years after ninth grade, 37 percent said their college counseling was “good” and 34 percent that it was “very good.” Of those whose child entered the military or went to work within five years after ninth grade, 50 percent said their child’s college counseling was “not very good,” 30 percent that it was “good” and 20 percent responded it was “very good.” Of those whose child dropped out or were still in high school five years after ninth grade, 100 percent stated that their child’s college counseling in high school was only “fair.”

**TABLE 14** Parents’ Rating of CSFB Scholarship Recipients’ High School College Counseling Environments

Rating of High School College Counseling	Percentage of Parents
Not good at all	15%
Fair	19%
Good	35%
Very good	31%
<b>Total</b>	<b>100%</b>

**FIGURE 5** Parental Opinions of High School Counseling Environment by Activity of CSFB Alumni Five Years Post-Ninth Grade





## Conclusion

This study was exploratory in nature, looking to examine the variations in experiences of elementary scholarship recipients as they left their scholarship years and entered a range of urban high schools, and to identify possible connections between those high school experiences and the educational attainment of those students. In doing so, this research posed three questions:

1. Does having scholarship support to attend a private elementary school of choice facilitate a “disadvantaged” student’s success in high school graduation and/or enrollment in college?
2. What types of supports for college attendance and success are these scholarship recipients being provided in high school, and are they exposed to different types of supports and resources?
3. Is there a relationship between the availability of high school supports for college attendance and scholarship recipients’ access to and enrollment in college?

This type of research has implications for private scholarship organizations like CSFB, publicly funded school choice programs, for low-income families, and for the educational community at large, all of whom have a stake in ensuring more economically disadvantaged students are able to reach higher levels of academic success than they have historically achieved.

This study found that CSFB elementary scholarship recipients had indeed been highly successful in their post-elementary educational achievements. Nearly all CSFB alumni contacted had graduated from high school in four or fewer years after eighth grade—97 percent to be exact. This high percentage is nearly identical to tracking studies completed with Children’s Scholarship Fund programs in other metropolitan areas (Philadelphia, Charlotte, and Toledo). The percentage is much higher than the national high school graduation rate of 70 percent, and higher than the Baltimore City Public School (BCPS) graduation rate of 38 percent to 64 percent.

Enrollment in college—two-year and four-year post-high school—was also very high at 84 percent five to 10 years after eighth grade. This college enrollment rate was much higher than the plus-five-year post-ninth-grade college enrollment rate of 32 percent for students in BCPS.<sup>63</sup> Enrollment in four-year colleges vs. two-year colleges among CSFB alumni was also much higher than enrollment rates for low-income young adults nationally or for BCPS graduates. Of those who enrolled in college, 73 percent of CSFB alumni enrolled in four-year colleges, and 23 percent enrolled in two-year colleges, compared with 53 percent and 47 percent respectively for BCPS students. In Baltimore, this method of providing need-based scholarships to attend elementary schools of choice appeared to achieve its goal of facilitating high rates of high school graduation for the recipients of those scholarships.

With regard to the second question, a wide variation was found in the amount and type of college preparation resources in high schools attended by scholarship recipients and in the extent to which those recipients took advantage of those resources. This has implications for the school choice community, as one cannot assume a student will attend a well-resourced high school simply because their parents have taken the initiative to select an elementary school for them. CSFB scholarship recipients attended a wide variety of high schools after eighth grade, including regular public schools, charter schools, Catholic schools, magnet schools, and private schools. But, even among those school types, wide variations existed in the types of college preparation resources provided.

Finally, in addressing the third question, an association was found between the college preparation resources available to scholarship recipients in their high schools and their future enrollment in college. Those CSFB scholarship recipients with stronger college preparatory environments in high school (as assessed by their parents) were more likely to go to college after high school; although that assessment was not predictive of whether or not they attended two- or four-year colleges. High school college-preparatory environments of college goers were very similar to those who did not enroll in college; however, the college

goers were more likely to take advantage of services when they were available (e.g., college trips, college admissions test prep classes). It appears it may not be the particular amount or type of college preparatory resources that are available to high school students, but the extent to which they are encouraged to use those resources by their parents and adults within and outside of school. This is supported by the finding that parents of students in this study who enrolled in college were found to have higher education levels than the average for American adults, and they were more likely to have a strong desire to see their children enter and succeed in college. This finding has implications for both public policymakers and private scholarship programs, as it may be more simple and effective to provide mentors and adults to inform students about college and encourage high school students to take advantage of college preparation resources in their high school than to attempt to add more resources into the thousands of private and public high schools across the country.

The results of this limited, exploratory study suggest that students from low-income families who receive scholarships to attend the private elementary school of their choice are, in general, supported by strong home cultures that are oriented toward helping the student pursue higher education. However, the high schools their children attend do not always provide the college-preparatory resources that can help them reach challenging college environments. Scholarship organizations could help their students to pursue college in two key ways: keeping in touch with the families and directing them toward free or low-cost college preparation resources (e.g., free counseling, low-cost SAT test preparation), and developing a network of high schools (in this case that would mean at least 61 schools) attended by their scholarship alumni that can collectively provide the types of free or low-cost college preparation resources that will facilitate their pursuit of higher education degrees. As this study found, the first task is complicated by the fact some scholarship organizations are not organized to maintain long-term contact with their alumni, and, in a matter of a few years, much of the families' contact information might be outdated. Regarding working

with local high schools, to get the most benefit to their alumni, scholarship organizations will need to identify the high schools they are attending and develop a relationship with those schools to ensure alumni and their parents are being connected with the best possible resources. If those schools do not provide critical college preparatory elements, such as financial aid counseling, the scholarship organizations will need to connect them with organizations that provide those types of services or educate them in how to offer those services to their students.



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## About the Author



Dr. Alex Schuh is the founder and director of FRONTIER 21 Education Solutions, an education research and evaluation firm in Bala Cynwyd, PA. He holds a Ph.D. in Educational Psychology from the University of Pennsylvania, where he studied in the Policy Research, Evaluation and Methods program. His graduate work included policy research and evaluation, test construction and administration, collaborative learning, and uses of computer media for learning. He earned his bachelor's degree from Yale University in Anthropology.

Dr. Schuh is an experienced educational evaluator, directing evaluation research projects for a wide variety of government agencies, schools, and community-based organizations. He has conducted both qualitative and quantitative evaluations of many local and national education programs, including Children's Scholarship Fund programs in multiple states, federal Enhancing Education through Technology (EETT) grants, 21st Century Community Learning Centers, distance education programs, museum-school partnerships, afterschool programs, reading programs, technology integration programs, charter schools, and teacher training projects.

Since 1997, he has helped to design and establish more than 40 charter schools across the country, including the first residential charter school, a bilingual (English/Spanish) virtual school, and a charter school based on the ideas of emotional intelligence. Under his direction, FRONTIER 21 has helped to support the implementation, turnaround, and improvement of dozens of charter schools, through fundraising and grant writing, curriculum writing and program development, strategic planning, and assessment implementation and analysis.

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