

College Enrollment and Persistence of Preuss Alumni Preuss and Comparison Students in the Classes of 2005 and 2006

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Executive Summary

Wyner et al (2007) conclude that academic success among high achieving students from low income backgrounds is associated with socioeconomic factors such that a lower proportion of these students remain successful as they progress from elementary school through college.

One effort to increase high achievement among students with strong academic backgrounds and poor socioeconomic predictors of success was undertaken in the late 1990's at The Preuss School on the UCSD campus. How well has The Preuss School succeeded in fulfilling its college mission to date? This study considers the college outcomes for the Preuss classes of 2005 and 2006 and focuses in particular on the lottery-selected Preuss and Comparison students in the 2005 and 2006 classes. Analysis is based on data from the National Student Clearinghouse, a non profit organization that receives college records information from over 3,200 colleges and universities, and is the most comprehensive source of such data.

Findings

“Preuss” refers to the students with continuous enrollment at Preuss from 1999 through graduation, and “Comparison” to those with continuous enrollment in other schools in the San Diego Unified School District from 1999 to graduation. “Original Preuss” refers to all students initially assigned by lottery to Preuss, and “Original Comparison” to all students assigned by lottery to the Comparison waitlist in 1999:

- Students with continuous attendance at Preuss enrolled in four-year colleges after high school at a higher rate than did Comparison students.
- The overall college enrollment rate (i.e. enrollment in 2 and four-year colleges in contrast to no record of college enrollment) of the continuous attendance Preuss and Comparison Group students was not substantially different in either the class of 2005 or 2006.
- In the 2nd year after high school graduation, a higher proportion of continuous attendance Preuss students attended four-year college than did Comparison alumni, and this difference in attendance rates appeared in both the 2005 and 2006 cohorts.

- Students from both Preuss and Comparison groups who attended CSU campuses left college at higher rates than did students who attended UC campuses.
- In the combined 2005 and 2006 classes, Preuss's continuous attendance Hispanic graduates (N=36) enrolled in four-year college after high school at a higher rate than did Hispanic students in the Comparison Group.
- Analysis of outcome data was conducted using the original lottery assignments, whether or not "Preuss" students remained at Preuss, and whether or not Comparison students remained in the San Diego Unified School District, left that district, or entered Preuss. These analyses reach similar findings regarding differences between Original Preuss and Original Comparison students, and support the conclusions stated above.

One effort to increase the educational opportunities of high achieving students from low-income backgrounds was undertaken in the late 1990's at UCSD. The Preuss School was formed in response to the rejection of affirmative action in California public education (see Rosen and Mehan 2003 and Lytle 2008 for discussions of the vision and circumstances surrounding the school's founding).

The academic progress of Preuss School students has been a subject of interest since the school opened in 1999. Preuss accepts students who are from low income families and whose parents have not completed college, students whose academic promise and interest in attending college has been demonstrated in an application letter, good academic records, and letters of recommendation. Thus Preuss might be considered a single (college) track school for academically engaged students from low income backgrounds.

There are few schools that are comparable to Preuss in academic achievement and demographic profile. The API ranking of California public high schools by the California Department of Education is based on results of statewide testing, and the ranks run from one to ten, with ten the highest or best. There is an association between neighborhood income and API, with higher API schools found in wealthier neighborhoods.

Using information from the website of the California Postsecondary Education Commission (CPEC), we found that in 2005 Preuss was one of only five API 10 schools classified as serving a student population that had greater or equal to 60% of students eligible for free or reduced-price meals and 30% or less English learners (EL). Specifically, in 2005, Preuss was classified as having 100% of their students eligible for free and reduced price meals, and 2% EL.² The five comparable schools in 2005 are Francisco Bravo Medical Magnet High in Los Angeles (86% eligible for free or reduced price meals, 7% EL); Harbor Teacher Preparation Academy in Wilmington (64% of students eligible for free or reduced-price meals, 2% EL), Hawthorne Math and Science Academy High in Hawthorne (77% of students eligible for free and reduced price meals, 16% EL); Mattole Triple Junction High in Petrolia (four students in graduating class, thus results suppressed); and Middle College High in San Bernadino (64% eligible for free or reduced-price meals, 8% EL).

In 2006 100% of Preuss students were eligible for free and reduced price meals, and 6% were EL. There was only one comparable school, Hawthorne Math and Science Academy High in Hawthorne (70% eligible for free or reduced price meals, 9% EL).

The Preuss School has a clear college-going mission, and this mission is understood and shared by its students (McClure et al 2005:69-70). To facilitate this mission, the school offers a college-preparatory curriculum and "supplements instruction with a comprehensive system of academic and social supports, including a longer school day and longer school year (which provides more intense opportunities for in-depth

² The low percentage of English Learners (EL) at the school may be due to the fact that the school re-tests EL students frequently and makes a concerted effort to have them reclassified as English proficient.

learning), tutoring by UCSD undergraduates, ‘Saturday Academies’ for students who continue to struggle, psychological counseling, mentoring by community members, and parental involvement and education.” (Alvarez & Mehan, 2005:1). In addition, Preuss supporters provide scholarships to some Preuss alumni.

How well has The Preuss School succeeded in fulfilling its college preparation mission to date? This study considers the college outcomes for students in the classes of 2005 and 2006. The alumni study is part of a larger investigation of outcomes associated with the Preuss educational model, and whether its methods and successes can be adapted to neighborhood schools with varied forms of governance and serving students less initially focused on academic achievement.

Study Design

One way of investigating the school’s impact on college-going is through comparison of Preuss students with a comparison or control group. The approach taken here compares students who had continuous attendance at Preuss with students who participated in the Preuss admissions lottery, were eligible to attend, and who had continuous attendance at other schools in the San Diego Unified School District. These are referred to as the “continuous attendance” Preuss and “continuous attendance” Comparison groups.

A second method of exploring this question compares lottery participants according to their original lottery assignments to Preuss or Comparison groups, whether or not “Preuss” students continued at Preuss, and whether the “Comparison” students eventually attended SDUSD, Preuss, or schools outside SDUSD. While this second effort may seem less relevant to the influence of a Preuss education on college going, it provides a strong test of the impact of Preuss on college outcomes (Shavelson and Towne, 2002; Hollis and Campbell 1999). Two recent studies (Betts and Hill, 2006, RAND 2009) note the paucity of randomized studies of academic outcomes of charter schools, and this study of a single charter school is an effort to answer that call.

Data Sources

The primary data for this study comes from the National Student Clearinghouse, an independent non-profit organization that collects information from participating post-secondary educational institutions. The Student Clearinghouse is by far the best source for centralized records of college enrollment and degree completion, and collects data from over 3,200 colleges and universities. However, the Clearinghouse relies on colleges to provide the data on a regular basis. Colleges provide the information on a voluntary basis, students may opt out of reporting, and data requests to the Clearinghouse are most easily fulfilled when there is sufficient identifying information to locate the students. A student name change, for instance, can hinder identification of college records. It is

likely that some colleges are more thorough and prompt in submitting information to the Clearinghouse. For these reasons some students attending college were not located in Clearinghouse databases.

Another potential source of information on college enrollment is the “Statement of Intent to Register” (SIR), which is a provisional step in the college enrollment process and consists of a document students send in order to provide notice to the college or university they have chosen to attend. The Preuss School and other secondary schools often base their annual public announcements about college-enrollment rates on students’ “Statement of Intent to Register” which are provided by their students. Preuss students provide SIR information to The Preuss School in April and May of students’ senior year. The University of California Office of the President³ website notes that, at UC campuses, the “final enrollment figures for the fall term are typically available in January of the following Year.” According to the UCSD Admissions office, typically between 5% and 7% of students submitting SIR to UCSD do not enroll in the fall following their graduation from high school. For these reasons, the SIR data is an approximation of initial college enrollments, and provides no information about college-going in subsequent years.

The San Diego Foundation offers college scholarships to needy students each school term, and the students provide the Foundation with records of attendance and grades to maintain the scholarships. The leadership of the Foundation sought students’ permission to share information with CREATE, and three students gave their consent. However, all three records overlapped with information available from the Clearinghouse. The Weil Family Foundation is one of the contributors to the SD Foundation, and provides CREATE with informal non-transcript information on students’ college attendance. Some of this information located students who were not reported by the Clearinghouse.

Further information on college-going was provided by UCOP and UCSD. However, this provided information on only a few students not located by the Clearinghouse.

How accurate are the SIR and the Clearinghouse with respect to initial college enrollments? While we cannot provide a definitive answer, it is possible to compare them against one another, and against all sources of data collected by CREATE. The following table compares Clearinghouse records with students’ Statement of Intent to Register and with a combination of data from the Clearinghouse, transcripts, interviews, surveys, and local funders, incorporating all sources of data available to CREATE. The survey and interview data and some information from funders are based on self report, and may be less reliable for that reason.

³ <http://www.ucop.edu/news/factsheets/2008/fall2008sir.html>

Table 1

| Comparison of Sources of College-Going Information: Reporting on First Enrollment in Two and Four-Year Colleges Combined Graduating Classes of 2005-2006 | | | | | | |
|--|-------------------------------------|-------|-------------------------------------|-------|--|-------|
| College Enrollment | Information Sources | | | | | |
| | Statement of Intent to Register* | | National Student Clearinghouse** | | All Currently Available Sources*** | |
| | # | % | # | % | # | % |
| No record of enrollment | 0 | 0 | 37 | 23.41 | 16 | 10.01 |
| Two-year college | 28 | 17.39 | 21 | 13.29 | 24 | 15.18 |
| Four-year college | 133 | 82.60 | 100 | 63.29 | 118 | 74.68 |
| Total | 161 | 99.99 | 158 | 99.99 | 158 | 100 |
| *The Statement of Intent to Register is provided by The Preuss School; ** National Student Clearinghouse is a non-profit organization *** "All Sources" includes the National Student Clearinghouse, UCOP, the Preuss alumni report, San Diego Foundation, Weil Family Foundation, interviews and surveys but does not include the SIRs. | | | | | | |

As can be seen in the table above, the information derived from students' Statement of Intent to Register is different than information from the Clearinghouse concerning fall enrollments. According to SIR data, all Preuss graduates in the Classes of 2005 and 2006 were planning to attend college in the fall after they graduated, while the Clearinghouse found no record of college enrollment for 23.41% of the students. To be sure, the Clearinghouse figure can mean that these students are not attending college, or that the Clearinghouse has no record of existing enrollments. And interviews indicate that even before graduation, some students have decided not to attend college despite submission of a SIR. Using all sources of data currently available to CREATE, including 'hard' transcript information and 'soft' interview data, 10.1% of Preuss students did not attend any college in the fall after graduation. The actual figure, however, may be higher or lower.

While the sources vary widely in reporting the percentage of students *not* attending college, they are quite similar in their estimation of the proportion of college students attending two-year as opposed to four-year institutions. Here, the proportion of college students in four year colleges versus two year colleges ranges from 73% to 78%, with the low estimates of four-year college attendance coming from "all sources" (as defined above) and the highest estimate of four-year college enrollment appearing in the Statements of Intent to Register data provided by The Preuss School.

Only Clearinghouse data are used in the 'Preuss-Comparison' discussions to avoid biasing the results in favor of students whose information is more readily available to CREATE. SIR data are not included in these analyses because the data are collected in spring while most students report to college in the fall, and because SIR provides no information on college persistence.

Students

The Preuss School opened in 1999 with a class of 8th graders, another of 7th graders, and a third class of 6th graders. Each year a higher grade level was added to the school to serve the students continuing at Preuss in their 9th grade year and so on through the 12th grade. In fall of 2003 the range of grade levels served by Preuss was complete, and students could attend from 6th through 12th grades. As students left Preuss⁴ (for reasons of preference, family mobility, and so forth), applicants were added to the school. Thus the graduating classes include students who entered in middle school and others who entered in high school.

The applicants to The Preuss School in the graduating classes of 2005 and 2006 included more eligible students than the school could accommodate. Therefore, students were selected by lottery to attend, while the equally eligible students who were not selected remained on the waitlist and attended other schools. The students who were not selected to attend Preuss and remained in the San Diego Unified School District (SDUSD) were treated as members of the Comparison Groups.⁵ Students who remained at The Preuss School are included in the continuous Preuss sample, and wait-listed students who remained in the San Diego Unified School District (SDUSD) are included in the continuous Comparison group sample.

Table 2 below shows the number of accepted applicants to Preuss in 1999, students entering and leaving the school after 1999, and the graduating classes. Table 3 provides similar information about the comparison students. The point is simply to show how these categories relate to one another, and the remainder of this paper focuses on those accepted and not accepted by lottery in the classes of 2005 and 2006.

There were 73 students in the Preuss graduating Class of 2005. Thirty-one of them (42% of the graduating class) participated in the 1999 lottery and attended Preuss from 7th through 12th grade. The remaining forty-two students in the 2005 graduating class entered Preuss after 1999. Three students were originally Comparison Group students on the lottery wait-list, and thirty-nine students (53.4% of the class) were not part of the 1999 lottery, and applied and were accepted after 1999. Sixteen students (41% of those entering after 1999) entered in middle school, and twenty-three (59%) entered in high school.

There were 85 students in the graduating class of 2006. Twenty-four of them (28.2% of the graduating class) participated in the 1999 6th grade lottery and attended Preuss from 6th through 12th grade. The remaining sixty-one 2006 graduates entered Preuss after 1999.⁶ Eleven of the eighty-five students (12.9% of the graduating class) had participated in the 1999 lottery and were originally Comparison Group students on

⁴ In the Class of 2005, 21 students from the entering 7th grade cohort (40%) left Preuss, and the majority (66.7%) of those leaving Preuss remained in SDUSD, Twenty-eight students (54%) from the Class of 2006 entering 6th grade cohort left before graduation, and about half of them (57.1%) remained in SDUSD.

⁵ The majority of applicants to Preuss came from schools within the SDUSD.

⁶ 58% of them in middle school and 42% in high school

the lottery wait-list. The remaining 50 students (58.8% of the graduating class) were not part of the 1999 lottery, and applied to Preuss and were accepted after 1999

The 2005 and 2006 cohorts had 20 and 32 Comparison students respectively, students who remained on the waitlist and attended SDUSD continuously from 1999 through graduation. The 2005 and 2006 Preuss and Comparison Groups as they are defined here have been the subject of CREATE studies since 2004.

The following table shows the number and percent of students who began at Preuss in 1999, remained at Preuss, left Preuss, and entered the school in later years.

Table 2

| Number of Students in the 2005 - 2006 Preuss Groups Preuss Graduating Classes and "Preuss Lottery" Sample | | | |
|--|---------------------------|---------------------------|-------|
| | Class of 2005 | Class of 2006 | Total |
| | N (% of original sample) | N (% of original sample) | N |
| Began at Preuss in 1999, original random lottery sample | 52 (100) | 52 (100) | 104 |
| Remained at and graduated from Preuss | 31 (60) | 24 (46) | 55 |
| Left Preuss | 21 (40) | 28 (54) | 49 |
| | N (% of graduating class) | N (% of graduating class) | N |
| Preuss lottery students who remained at Preuss | 31 (42.0) | 24 (28.2) | 55 |
| Added to class after 1999 | 42 (57.5) | 61 (71.7) | 103 |
| Preuss Graduating Class | 73 (100) | 85 (100) | 158 |

The table below shows the number of students who were originally assigned by lottery to the Comparison group, and those who were taken off the waitlist and entered Preuss (these are also included in the table above, as part of the category titled "added to class after 1999"). The table includes students who left SDUSD for other school districts, and those graduating from the San Diego Unified School District.

Table 3

| Number of Students in the 2005 - 2006 Comparison Groups | | | |
|--|---------------------------------|---------------------------------|--------------|
| Comparison Group | Class of 2005 | Class of 2006 | Total |
| | N (% of original sample) | N (% of original sample) | N |
| Original Comparison Group | 31 (100) | 71 (100) | 102 |
| Left for Preuss | 3 (9.67) | 11 (15.5) | 14 |
| Left SDUSD for other districts | 8 (26) | 28 (39.4) | 36 |
| "Continuous" Comparison Sample Graduating from SDUSD | 20 (64.5) | 32 (45) | 52 |

There were no significant differences between the continuous Preuss and Comparison students on their Stanford Achievement Test (SAT-9) Language Arts tests taken in the year before they entered, 1998-1999. Further, there was no statistically significant difference between the Original Preuss and Original Comparison students in the 2005 or 2006 classes on those tests.

Demographic Characteristics

The following tables present the gender and ethnicity distribution in the Preuss and Comparison groups

The original samples were fairly balanced by sex, although more male students than female students left both the Original Preuss and the 2005 Original Comparison groups to attend other schools.

Table 4

| "Preuss Lottery" Students 2005-2006, Gender | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| Original Lottery Students | Class of 2005 | | Class of 2006 | |
| | Female | Male | Female | Male |
| | N (% of orig.) | N (% of orig.) | N (% of orig.) | N (% of orig.) |
| Began at Preuss in 1999, original random lottery sample | 27 (100) | 25 (100) | 31 (100) | 21 (100) |
| Remained at Preuss, continuous | 18 (67) | 13 (52) | 17 (55) | 7 (33) |
| Left Preuss | 9 (33) | 12 (48) | 14 (45) | 14 (67) |

Table 5

| Comparison Group 2005-2006, Gender | | | | |
|---|--------------------------|----------|--------------------------|----------|
| | Comparison Group | | | |
| | Class of 2005 | | Class of 2006 | |
| | Female | Male | Female | Male |
| | N (% of original sample) | | N (% of original sample) | |
| Original Comparison Group | 14 (100) | 17 (100) | 38 (100) | 33 (100) |
| Left for Preuss | 1 (7) | 2 (12) | 7 (18) | 4 (12) |
| Left SDUSD for other districts | 0 | 8 (47) | 17 (45) | 11 (33) |
| Comparison Sample Graduating from SDUSD | 13 (93) | 7 (41) | 14 (37) | 18 (55) |

The next table presents the ethnicities represented in the Preuss and Comparison groups. The tables do not distinguish between Asian Americans, Filipino Americans, and Pacific Islanders because the numbers of Filipinos and Pacific Islanders is very small. There were no Native Americans in these classes.

Table 6

| Ethnicity of Students in the 2005 - 2006 Preuss and Comparison Groups | | | | | | |
|--|--|----------|----------|----------|---------|-----------|
| | Preuss Students | | | | | |
| | African American | Asian | Hispanic | White | Other | Total |
| | N (% of Original Preuss Sample; % of Column) | | | | | |
| Began at Preuss in 1999, original random lottery sample | 28 (100) | 10 (100) | 57 (100) | 8 (100) | 1 (100) | 104 (100) |
| Remained at and graduated from Preuss | 9 (32) | 8 (80) | 36 (63) | 2 (25) | | 55 |
| Left Preuss | 19 (68) | 2 (20) | 21 (37) | 6 (75) | 1 (100) | 49 |
| Comparison Group | | | | | | |
| | N (% of Original Comparison Group; of Column) | | | | | |
| Original Comparison Group | 28 (100) | 12 (100) | 50 (100) | 11 (100) | 1 (100) | 102 (100) |
| Left for Preuss | 1 (3) | 3 (25) | 10 (20) | | | 14 (14) |
| Left SDUSD for other districts | 9 (32) | 2 (16) | 17 (34) | 8 (73) | | 38 (37) |
| Comparison Sample Graduating from SDUSD | 18 (65) | 7 (58) | 23 (46) | 3 (27) | 1 (100) | 52 (51) |

A fairly high proportion of African American (68%) and white (75%) students who entered the school in 1999 left The Preuss School before graduating. In contrast, 80% of the Asian American and 63% of the Hispanic students who began at the school in 1999 remained and graduated from Preuss. The same pattern of attrition does not appear in the Comparison groups. It is not clear why a higher proportion of African American and white students left the school. However, it will be important to see whether this pattern of attrition continues in later classes.

College Enrollment and Persistence: Preuss and Comparison Students

Enrollment Patterns among Lottery Students with Continuous Attendance

The question of interest here is the relative undergraduate performance of Preuss students with continuous attendance at Preuss (2005 N=31, 2006 N=24) and Comparison students who had continuous attendance at schools in the SDUSD (2005 N=20, 2006 N=32) in terms of their college enrollment and persistence. These students were eligible for Preuss, participated in the Preuss lottery in 1999, and remained either at Preuss or at schools in the San Diego Unified School District from 1999 through graduation in 2005 or 2006. Since the students were randomly assigned to the Preuss or Comparison groups, differences in college enrollments should be largely associated with the factor that divides them, *viz.* their secondary school attendance.

For these analyses, the Clearinghouse information is presented as it was provided, along with estimates of the minimum and maximum rates of college-going if those students with no record are actually in college. In addition, Fisher's exact test in SPSS for differences between two groups was conducted on the 'as is' data and using the provisional assumption that Clearinghouse information is accurate. The analyses employed here consider the relative proportions in a 2x2 table, for example considering two-year versus four-year college attendance among those attending college, or college versus no record of college attendance in two samples.

College enrollment is defined as full or part time enrollment during the first academic year after high school graduation. It includes students who attend college for part of an academic year. Students who enter college in their second year after graduation are counted as attendees in the second year but not in the first. While all the Preuss students in both graduating classes entered college during the first year after their graduation, one Comparison student in the 2006 class waited a year before entering college.

Table 7

| College Enrollment of Preuss and Comparison Students Classes of 2005 and 2006: | | | | |
|---|------------------------------|------------|------------------------------|------------|
| | Class of 2005, Enrollment | | Class of 2006, Enrollment | |
| | Preuss | Comparison | Preuss | Comparison |
| | N (%) | N (%) | N (%) | N (%) |
| No record | 6 (19.4) | 3 (15.0) | 3 (12.5) | 8 (25) |
| Two-year college | 2 (6.5) | 9 (45.0) | 3 (12.5) | 13 (40.6) |
| Four-year college | 23 (74.2) | 8 (40.0) | 18 (75.0) | 11 (34.4) |
| Total | 31 (100) | 20 (100) | 24 (100) | 32 (100) |

Enrollment in college

Students with continuous attendance at Preuss enrolled in four-year colleges after high school at a higher rate than did Comparison students. In the 2005 class, the four-year college enrollment ranges from 74.2% (the confirmed enrollments) to 93.6% (if those with no record are actually in college) for Preuss students, and 40% to 55% for Comparison alumni. In the 2006 class, enrollment in four-year colleges ranges from 75% to 87.5% for Preuss alumni and from 34.4% to 59.4% for Comparison alumni. In other words, even if all Comparison students with no record are actually in four-year colleges (the maximum), their enrollment rates would still be lower than for the Preuss students known to be attending four-year colleges (the minimum). This confirms the pattern presented by interviews collected in 2005 (McClure, Strick, and Jacob-Almeida 2005) that indicated that Preuss students were attending four-year colleges at a higher rate and expands those finding to include the Class of 2006.⁷

In the two charts below, which depict the 2005 and 2006 enrollments, the striped section represents those with ‘no record,’ and the charts show that even if all Comparison students with ‘no record’ were attending four-year colleges, their enrollment rate would still be less than confirmed enrollments for the continuous Preuss students.

⁷ If Clearinghouse figures are accurate as given, 74% of the 2005 Preuss alumni (N=31) and 40% of Comparison alumni (N=24) enrolled in four-year colleges (p=.002 based on 2 v 4 year colleges among those attending college) In the 2006 cohort, 75% of Preuss alumni (N=24) and 34.4% of Comparison alumni (N=32) enrolled in four-year colleges after high school (p=.006 based on 2 v 4 year colleges). The proportions presented here are derived from the whole sample, including those not enrolled in college. The P values are based on the two-year/four-year comparison among those attending college, and excluding students not enrolled in college.

Figure 1

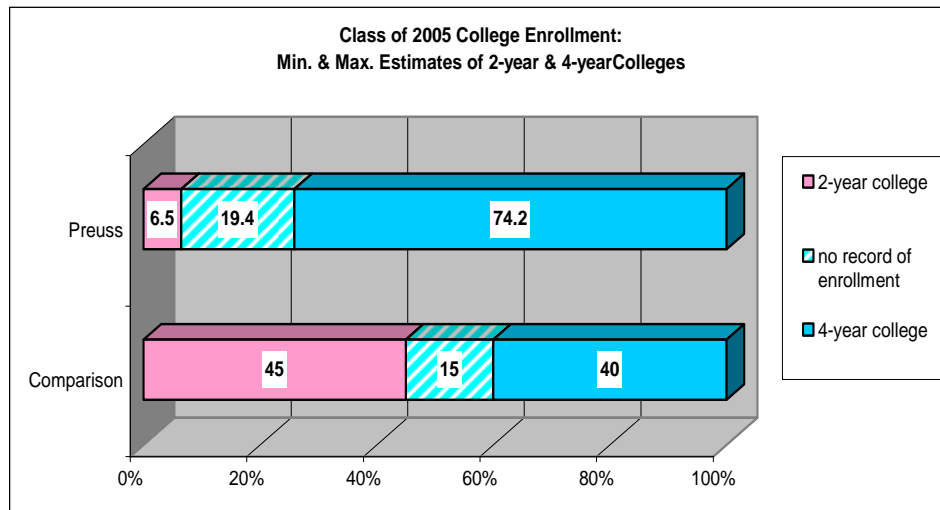
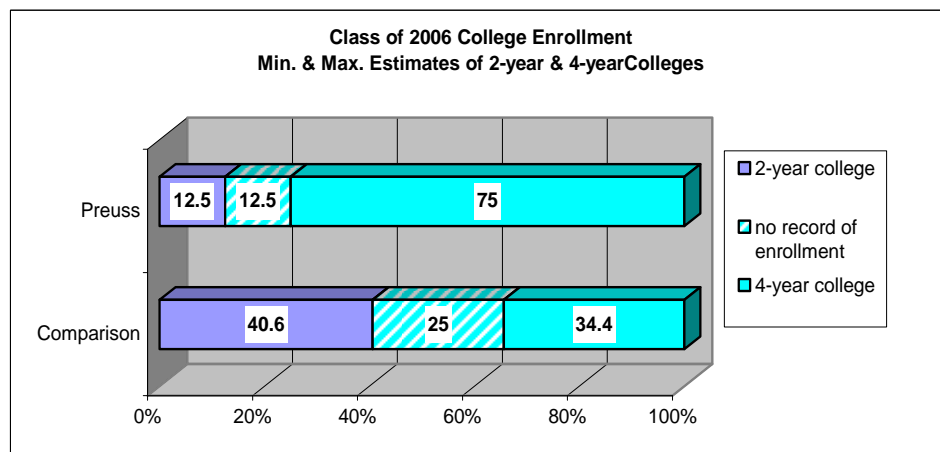


Figure 2



The Comparison alumni had higher rates of enrollment in community colleges than continuous-attendance Preuss alumni. Community college enrollments of Comparison alumni in the 2005 cohort (N=20) ranged from a minimum of 45% to a maximum of 60% if all those with no Clearinghouse record were enrolled in community college, in contrast to a minimum of 6.5% and a maximum of 25.9% for the Preuss alumni (N=31). Similarly, in the 2006 cohort between 12.5% and 25% of Preuss alumni (N=24) enrolled in two-year colleges, in contrast to between 40.6% and 65.6% of Comparison alumni (N=20).

The overall college enrollment rate (meaning enrollment in either a two-year or a four-year college in contrast to no record of college attendance) of the continuous attendance Preuss and Comparison Group students was very similar. In the 2005 cohort, between 80.6% and 100% of the Preuss cohort (N=31) and between 85% and 100% of the Comparison group (N=24) enrolled in college; in the 2006 class, between 87.4% and 100% of Preuss group (N=24) and between 75% and 100% of the Comparison group (N=32) were enrolled in college.⁸

The two charts below provide the same enrollment information, but this time those with no record of college enrollment are represented with white background. The charts show that the overall enrollment rates are similar for Preuss and Comparison in both cohorts.

Figure 3

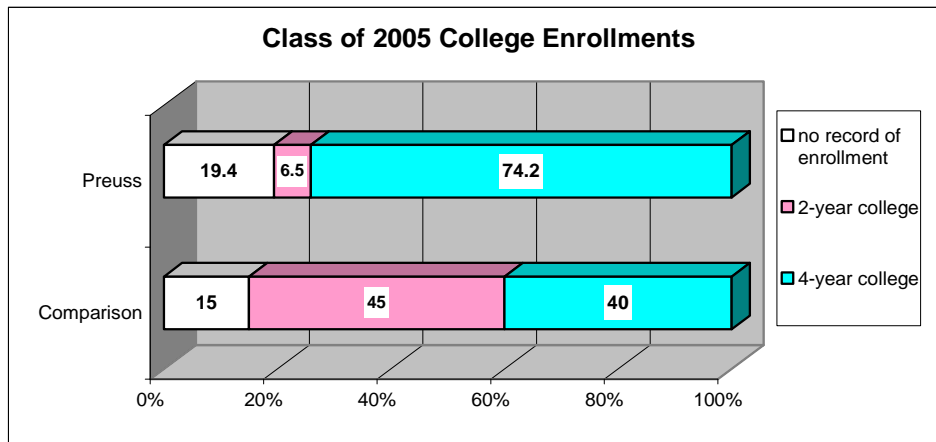
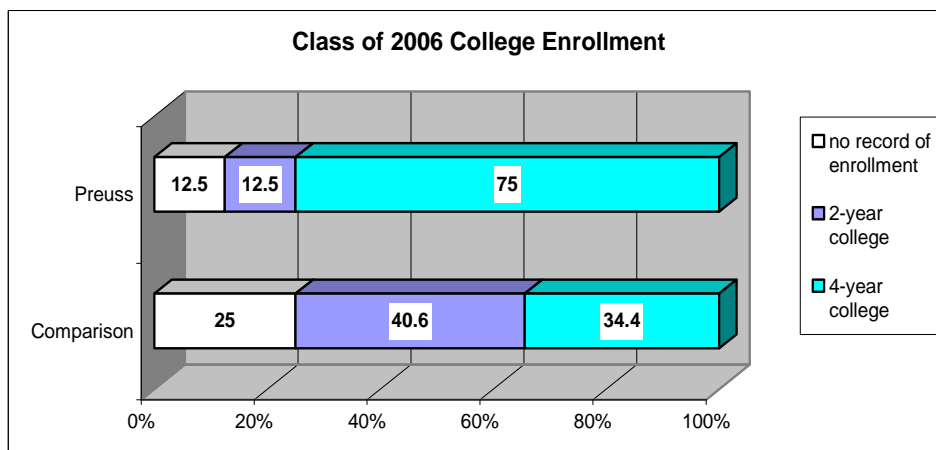


Figure 4



⁸ 80.6% of the 2005 Preuss alumni (N=31) and 85% of Comparison alumni (N=24) enrolled in either a two or four-year college (p=.499 based on college v no college). In the 2006 cohort, 87.5% of Preuss alumni (N=24) and 75% of Comparison alumni (N=32) enrolled in either a two or four-year colleges after high school (p=.206 based college v no college).

UC, CSU, Private, Community College Enrollment

In the 2005 cohort, the majority of continuous attendance Preuss alumni (N=31) enrolled in California State Universities followed closely by University of California (UC) campuses, then private and community colleges, and out-of-state four-year public universities. Comparison students (N=20) enrolled in community colleges, followed by UC campuses and CSU colleges and (quite rarely) private university. The percentages appear in table 8 below

The same information can be interpreted using estimates of minimum (known) enrollments and maximum (known plus those with no record) to compare college outcomes. In the 2005 class a minimum of 35.5% and a maximum of 54.4% of Preuss alumni were enrolled in CSUs, from 29% to 48.4% were enrolled at UCs, between 6.5% and 25.9% were in private colleges with a similar range in community colleges and between 3.2% and 22.6% were enrolled at out of state four-year colleges. Ranges for the 2005 Comparison group are 45% to 60% at community colleges, 20% to 35% at UCs, 15% to 30% at CSUs, and 5% to 20% at private colleges.

Table 8

| UC, CSU, Private, Community College Enrollment | | | | |
|--|--------|------------|--------|------------|
| | 2005 | | 2006 | |
| | Preuss | Comparison | Preuss | Comparison |
| No Record | 19.4% | 15.0% | 12.5% | 25% |
| Community College | 6.5% | 45.0% | 12.5% | 40.6% |
| University of California | 29.0% | 20.0% | 33.3% | 9.4% |
| California State University | 35.5% | 15.0% | 29.2% | 21.9% |
| Private College | 6.5% | 5.0% | 12.5% | 0 |
| Out of State Four-Year College | 3.2% | 0 | 0 | 3.1% |
| Total Percent | 100 | 100 | 100 | 100 |

The 2006 continuous attendance Preuss alumni (N=24) enrolled in the University of California (UC) and California State University (CSU) in almost equal numbers, while 2006 Comparison students (N=32) were most often enrolled in community colleges, followed by CSUs and then UCs. For Preuss students the estimated enrollment ranges from a minimum of 33.3% (the known enrollment) to a maximum of 45.8% (if all those with no record are added to the known attendance) at UCs, 29.2% to 41.7% at CSUs, 12.5% to 25% at private four-year colleges, and another 12.5% to 25% at community

colleges. For Comparison students the ranges were 9.4% to 34.4% at UCs, 21.9% to 46.9% at CSUs, 40.6% to 65.6% at community colleges, and 3.1% to 28.1% at other four-year colleges.

College Enrollment for Sub-groups of Graduates

Do the benefits associated with Preuss reach all students attending the school? In the combined 2005 and 2006 classes, Preuss's continuous attendance Hispanic graduates (N=36) enrolled in four-year as opposed to two-year colleges after high school at a higher rate than did Hispanic students in the Comparison Group (N=23). In the combined 2005-2006 samples, between 75% and 94% of Preuss Hispanic students enrolled in four-year colleges, in contrast to between 30.4% and 60.8% of Hispanic Comparison students, a striking difference. The maximum possible enrollment at four-year colleges for Comparison students was lower than the minimum, or known, four-year college attendance of the Preuss students.⁹ The enrollment at two- and four-year colleges was also higher for Preuss's Hispanic alumni, with a minimum of 81% and a maximum of 100% for Preuss alumni and a minimum of 70% and a maximum of 100% for Comparison alumni. In the combined classes there was no record of enrollment for 19% of Preuss and 30.4% of Comparison alumni.¹⁰

Preuss-Comparison differences in enrollment rates appeared to hold for Asian American and African American students to a lesser degree, but there were too few African American, Asian American or white students to allow analysis. Thus the school has an impact on college enrollment for its Hispanic students, while the impact on other student sub-groups is not yet known.

Persistence Patterns

This section considers Preuss and Comparison students' persistence towards receiving a Bachelor's degree. Data are available on students beginning Year 2 and Year 3 in the 2005 cohort, and on Year 2 for the 2006 cohort. While all Preuss graduates entered college directly after graduating high school, one of the 2006 Comparison students waited a year before entering college; this student is included with the second year students.

⁹ Using the minimum enrollments figures, the contrast in four-year v two-year college enrollment for the Preuss and Comparison Hispanic alumni in college are significantly different ($p < .001$).

¹⁰ Using the minimum figures (confirmed enrollments), these are not significantly different, $p = .255$.

Attendance in Fall of the Second Year of College

Table 9

| Attendance in the 2 nd Year of College: Preuss and Comparison Students Classes of 2005 and 2006: | | | | |
|---|---------------------------------------|------------|---------------------------------------|------------|
| | Class of 2005, Beginning of Year 2 | | Class of 2006, Beginning of Year 2 | |
| | Preuss | Comparison | Preuss | Comparison |
| | % | % | % | % |
| No record of attendance | 10 (32.3) | 7 (35.0) | 6 (25.0) | 14 (43.8) |
| Two-year college | 6 (19.4) | 9 (45.0) | 3 (12.5) | 9 (28.1) |
| Four-year college | 15 (48.4) | 4 (20.0) | 15 (62.5) | 9 (28.1) |
| Total | 31 (100) | 20 (100) | 24 (100) | 32 (100) |

A higher proportion of continuous attendance Preuss alumni than Comparison alumni were attending a four-year college in the second year after high school graduation, and the difference in two-year versus four-year college attendance rates appeared in both the 2005 and 2006 cohorts. In the 2005 cohort, the known (minimum) four-year college attendance for Preuss alumni (N=31) was 48.4% with a possible maximum of 80.7% if those with no records were actually in college. The four-year college attendance for Comparison students in the 2005 class (N=20) was 20%, with a possible maximum of 55% if all those with no record were actually attending four-year colleges. In the 2006 cohort, a minimum of 62.5% and a maximum of 87.5% of Preuss alumni (N=24) and a minimum of 28% and a maximum of 71.9% of Comparison alumni (N=32) were attending four-year colleges.¹¹ This continued the pattern of Preuss/Comparison differences established in initial college enrollments.

The two charts below represent the minimum and maximum attendance rates in four-year colleges in the 2nd year after high school graduation.

¹¹ Using the minimum figures, the Preuss and Comparison groups are dissimilar (2005, two-year v four-year contrast p=.024; 2006, Preuss two-year v four-year contrast p=.038).

Figure 5

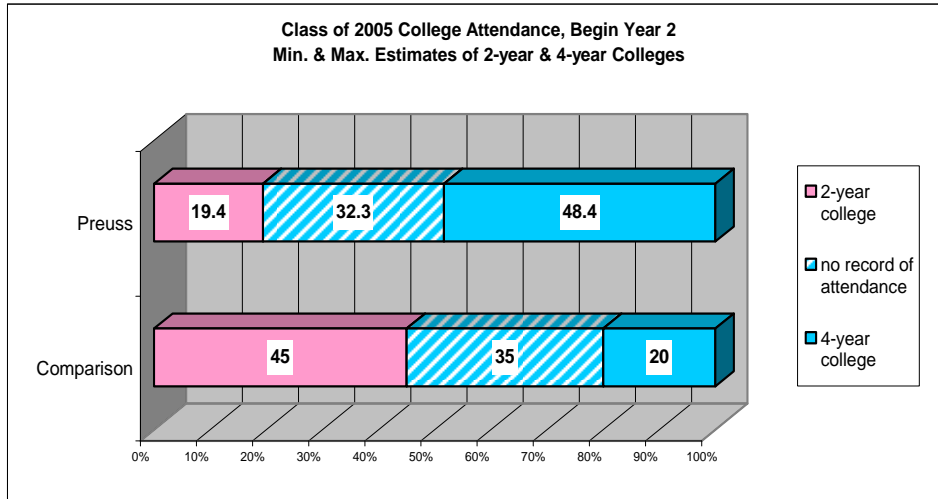
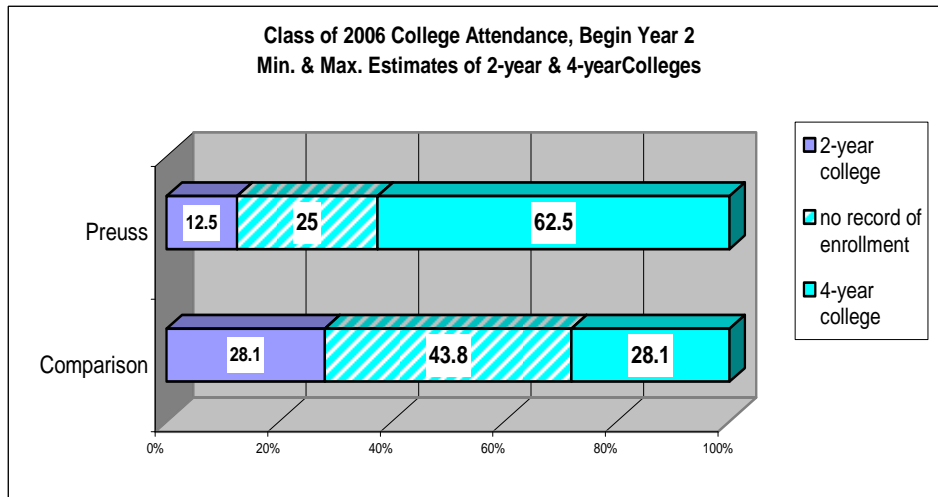


Figure 6



Preuss and Comparison students in the 2005 cohort were quite similar in their rates of overall (two-year and four-year combined) colleges attendance at the beginning of their 2nd year of college (Preuss, N=24, 67.8%, Comparison N=32, 70%). However, Preuss students in the 2006 cohort were attending college at a somewhat higher rate than the Comparison students, with 75% of the Preuss and 56.3% of the Comparison students attending either a two or a four-year college.¹²

¹² Using the minimum figures, the Preuss/Comparison difference in overall college attendance (based on college v. no college) is not statistically significant (2005, p=.537, 2006 p=.121).

Figure 7

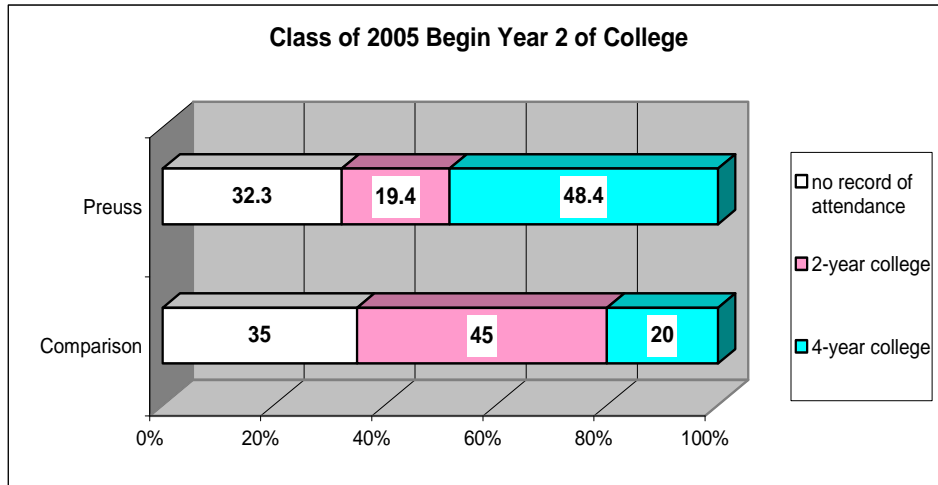
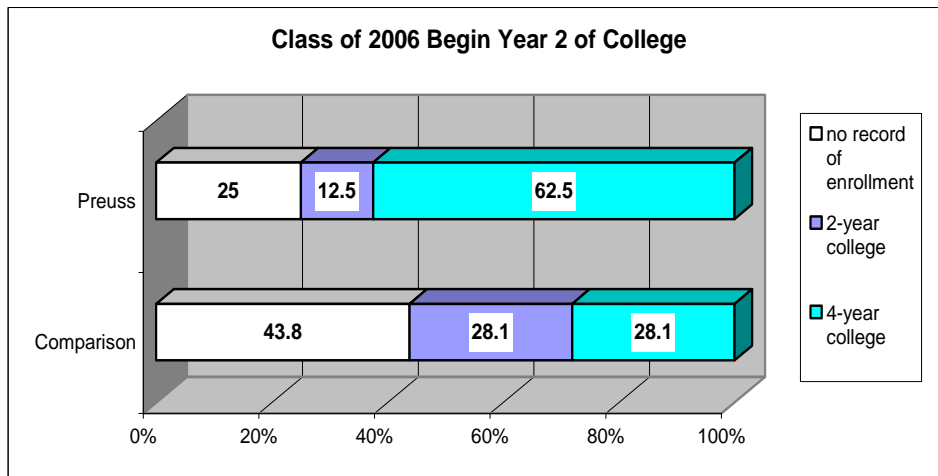


Figure 8



2005 Cohort: By the beginning of the second year of college, nearly a third (32%) of the 2005 Preuss alumni (N=31) were not attending college, a change of 12.6% from the same time the previous year. This is comparable to the proportion of the Comparison Group (35% of N=20) who were out of college. Most of the Preuss attrition was from California State Universities, and the number attending CSUs had dropped by about half from initial enrollment numbers. In contrast, the drop in UC attendance from initial enrollments was small (about 3%). There was an increase in the proportion of Preuss students attending community colleges (to 19.4%), though this continued to be substantially lower than the proportion of Comparison Group students in community colleges (45%). The low number of students initially enrolled in out-of-state and/or private colleges makes it difficult to measure change.

2006 Cohort: At the beginning of their second year in college, the proportion of Comparison students *not* attending college had nearly doubled (to 44%), with decreases

in the number attending CSUs and especially community colleges. The number of Preuss students *not* attending college had also doubled (from 12.5% to 25%), with all the change coming from a decrease in the number attending CSUs. In both Preuss and Comparison groups, the number of students attending UCs (Preuss 33.3%, Comparison 9.4%) and the number attending private and out-of-state colleges and universities remained stable through the beginning of the second college year.

Attendance in Fall of the Third Year of College

At the beginning of the third year of college, there is no record of college attendance for a comparable proportion of Class of 2005 Preuss (N=31) and Comparison (N=24) students (Preuss 32.3%, Comparison 30%). A higher proportion of Preuss students than Comparison students (Class of 2005) were located by the Clearinghouse in attendance at four-year colleges, but the difference was smaller than in previous years. About 35% of the Preuss students were in four-year colleges, as were about 25% of Comparison students. A third (32.2%) of the Preuss group was attending community college (in contrast to 45% of Comparison students), and another third (32.2%) was not in college. Most Preuss and Comparison students remaining in UCs through their first year (i.e. to the beginning of Year 2) continued to attend UCs during their second year of college (Preuss 22.6%, Comparison 15%), and Preuss students remaining in private and out-of-state colleges through the first year continued there through their second year. The drop in enrollment at CSUs appeared precipitous, particularly for the Preuss students, who enrolled in CSUs in greater numbers than did the Comparison students. Comparison enrollment dropped from 15% to 10%, while Preuss enrollment dropped from 35.5% of the Preuss sample to 6.5% by the beginning of their third year.

Figure 9

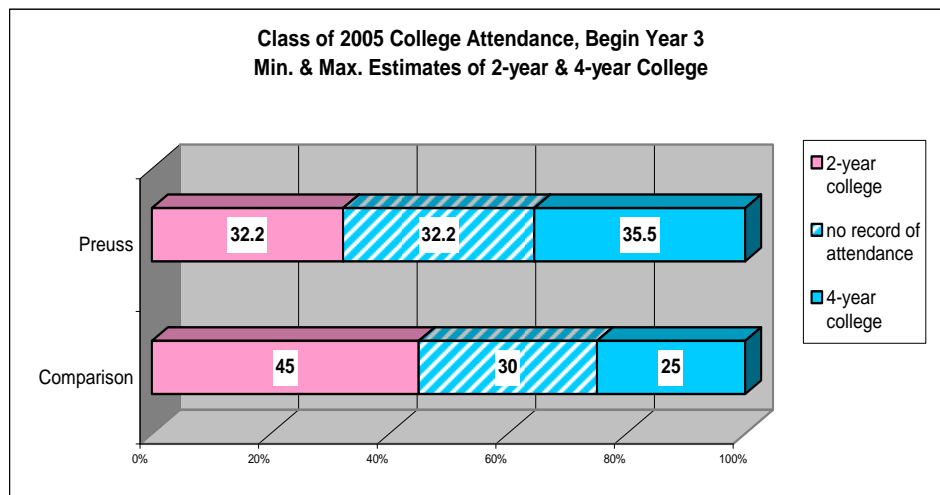
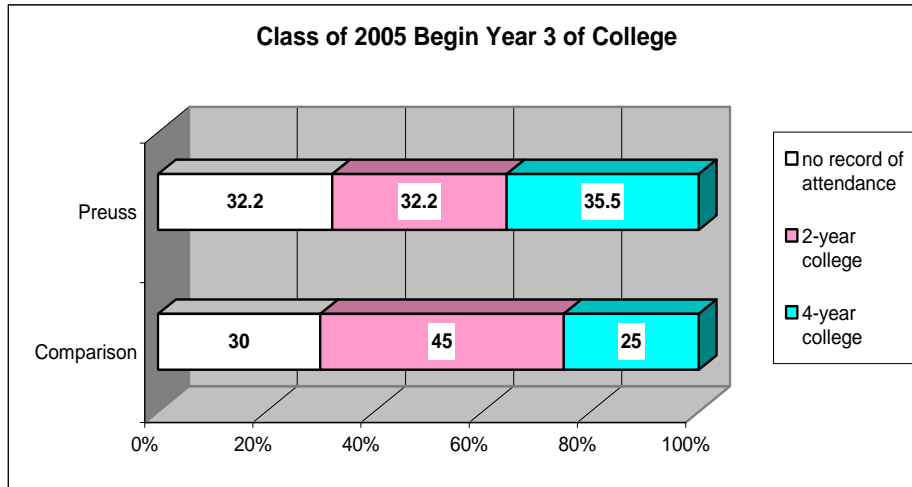


Figure 10



UC and CSU Differences in Retention

Using the Clearinghouse figures as given for the Preuss and Comparison cohorts of 2005 and 2006, the highest four-year college attrition was among those students attending CSUs, and this was particularly true for Preuss graduates in the 2005 cohort. Preuss enrollment in CSUs was especially high for the 2005 cohort, and their attrition rate was also high (35.5% to 16.1%); in 2006 attrition was lower than in the 2005 cohort, but nonetheless was high for both Preuss and Comparison students (Preuss attendance dropped from 29% to 16.7% and Comparison attendance dropped from 22% to 15.6%). For the combined Preuss and Comparison, 2005 and 2006 samples, the one year retention rate at UC universities was 91.66%, while the CSU retention rate was 45.8%.¹³ The combined Preuss and Comparison two-year retention rate in the Class of 2005 was 76.9% at UC campuses and the Preuss and Comparison two-year retention rate at CSU campuses was 28.6%. Whether the high CSU attrition rate represents a more general pattern among all entering under-represented students, and why this occurs is not known. However, it echoes Bowen and Bok's finding (1998) that under-represented students have higher retention rates at more selective colleges.

¹³ The one year retention rate at San Diego State University among students from schools with similar demographics in the high school graduating Class of 2005 was on the order of 65%. For the 2006 high school class the retention ranged from around 45% to 80%

Table 10

| UC, CSU, Private, Community College Enrollment | | | | | | |
|--|----------------------|-------------|------------|--------------------------|-------------|------------|
| | Preuss Class of 2005 | | | Comparison Class of 2005 | | |
| | Enrollment | Second Year | Third Year | Enrollment | Second Year | Third Year |
| No Record | 19.4% | 32.3% | 32.3% | 15.0% | 35% | 30% |
| Community College | 6.5% | 19.4% | 32.3% | 45.0% | 45% | 45% |
| University of California | 29.0% | 25.8% | 22.6% | 20.0% | 15% | 15% |
| California State University | 35.5% | 16.1% | 6.5% | 15.0% | 5% | 10% |
| Private College | 6.5% | 3.2% | 3.2% | 5.0% | 0 | 0 |
| Out of State Four-Year College | 3.2% | 3.2% | 3.2% | 0 | 0 | 0 |
| Total Percent | 100 | 100 | 100 | 100 | 100 | 100 |

Table 11

| UC, CSU, Private, Community College Enrollment | | | | |
|--|----------------------|-------------|--------------------------|-------------|
| | Preuss Class of 2006 | | Comparison Class of 2006 | |
| | Enrollment | Second Year | Enrollment | Second Year |
| No Record | 12.5% | 25% | 25% | 43.8% |
| Community College | 12.5% | 12.5% | 40.6% | 28.1% |
| University of California | 33.3% | 33.3% | 9.4% | 9.4% |
| California State University | 29.2% | 16.7% | 21.9% | 15.6% |
| Private College | 12.5% | 12.5% | 0 | 0 |
| Out of State Four-Year College | 0 | 0 | 3.1% | 3.1% |
| Total Percent | 100 | 100 | 100 | 100 |

Enrollment and Persistence: Original Random Assignments

One analytic concern is that students who left Preuss may be different in some way (e.g. interest in college, motivation, school performance) than those who stayed, and that the Preuss/Comparison differences in college outcomes are due to attrition from Preuss. What happens if we treat all students who began at The Preuss School in 1999 as “Original Preuss” groups for each graduating class, and those who began on the waitlist as “Original Comparison” groups in each graduating class? Do the enrollment and persistence patterns noted for students with “continuous attendance” still hold? This type of analysis obviates the concern about differential attrition, but raises others, including the concern that there is better ‘tracking’ information on the Preuss students, and that their college information is more complete.

The following table provides an overview of the applicants to Preuss and Preuss School graduates, and shows how the categories relate to one another.

Table 12

| Classes of 2005 & 2006, Overview of Preuss School Applicants by Random Assignment Status | | | | | |
|--|--|---------------|-------|---------------|-------|
| Original Lottery Assignments | | Class of 2005 | | Class of 2006 | |
| | | N | % | N | % |
| Original Preuss: All Students Accepted in 1999 | Preuss Students Who Left Preuss and SDUSD | 7 | 5.43 | 12 | 6.67 |
| | Preuss Students Who Transferred to SDUSD | 14 | 10.85 | 16 | 8.89 |
| | Preuss Students with Continuous Attendance & Graduation | 31 | 24.03 | 24 | 13.33 |
| | Sub-Total | 52 | 40.31 | 52 | 28.89 |
| Original Comparison: All Students on Waitlist in 1999 | Waitlist Students Who Left SDUSD | 8 | 6.20 | 28 | 15.56 |
| | Waitlist Students Who Transferred to Preuss | 3 | 2.33 | 11 | 6.11 |
| | Comparison Group, Continuous Attendance & Graduation SDUSD | 20 | 15.50 | 32 | 17.78 |
| | Sub-Total | 31 | 24.03 | 71 | 39.44 |
| Preuss Graduates Who Applied After 1999, No Assignment | Applied After Lottery, Graduated from Preuss | 39 | 30.23 | 50 | 27.78 |
| | Sub-Total | 39 | 30.23 | 50 | 27.78 |
| Unknown Assignment | Other; Not Classified | 5 | 3.88 | 5 | 2.78 |
| | Turned Down Admission | 2 | 1.55 | 2 | 1.11 |
| | Sub-Total | 7 | 5.43 | 7 | 3.89 |
| | Grand Total | 129 | 100 | 180 | 100 |

The following two tables compare the college-enrollment and college persistence of students originally assigned by lottery to Preuss, and those originally assigned by lottery to the Comparison waitlist.

Table 13

| Original Lottery Assignments, Class of 2005: College Enrollment and Persistence of Students Who Entered Preuss in 1999 <i>versus</i> Comparison Waitlist Students in 1999 | | | | | | | | | | | | |
|--|---|------|---|------|---|------|---|------|---|------|---|------|
| | Class of 2005, Enrollment | | | | Start 2 nd Year | | | | Start 3 rd Year | | | |
| | Entered Preuss in 1999 "Original Preuss" | | Comparison Waitlist Students in 1999 "Original Comparison" | | Entered Preuss in 1999 "Original Preuss" | | Comparison Waitlist Students in 1999 "Original Comparison" | | Entered Preuss in 1999 "Original Preuss" | | Comparison Waitlist Students in 1999 "Original Comparison" | |
| | N | % | N | % | N | % | N | % | N | % | N | % |
| No record | 15 | 28.8 | 9 | 29.0 | 18 | 34.6 | 13 | 41.9 | 23 | 44.2 | 13 | 41.9 |
| Two-year college | 9 | 17.3 | 12 | 38.7 | 14 | 26.9 | 12 | 38.7 | 12 | 23.1 | 13 | 41.9 |
| Four-year college | 28 | 53.8 | 10 | 32.3 | 20 | 38.5 | 6 | 19.4 | 17 | 32.7 | 5 | 16.1 |
| Total | 52 | 100 | 31 | 100 | 52 | 100 | 31 | 100 | 52 | 100 | 31 | 100 |

The table above presents information on the 2005 cohort, and the table below

Based on available data, the Original Preuss students in both the 2005 and 2006 cohorts enrolled in four-year colleges in contrast to two-year colleges at a higher rate than the Original Comparison students, and attended a second year at four-year colleges at higher rates. The 2005 cohort evidenced the same pattern in the third year after graduating high school (we do not yet have data on the 2006 cohort in their third year). However, the maximum estimates of Original Comparison enrollment and attendance (based on all those known to be in four-year colleges plus those with no record) is higher than the minimum estimates (known enrollments in counts given by the Clearinghouse) of Original Preuss enrollment¹⁴ and attendance. Thus it is conceivable though unlikely that more Original Comparison than Original Preuss students enrolled in and attended a second and third year at four-year colleges after their graduation.¹⁵

This analysis also finds that the Original Preuss and the Original Comparison groups (in both cohorts), are quite similar in the rate at which they attend *any* college (two-year combined with four-year colleges versus no record). This is the same finding, noted earlier, that was observed for the students who remained in their lottery assignments at Preuss or in the SDUSD until graduation.

To consider the impacts on subsets of students, the 2005 and 2006 cohorts were combined to increase sample size. The Original Preuss Hispanic students attended

¹⁴ In the Class of 2005, a confirmed proportion of 53.8% of the Original Preuss students (N=52) and a maximum of 82.6% (if all those with no record are actually in college) and a minimum of 32.3% and a possible maximum of 61.3% of Original Comparison students (N=31) were enrolled in four-year college. In the 2006 class, the Original Preuss students' enrollment in four-year colleges ranges from a minimum of 44.2% to a maximum of 78.8%, and the Original Comparison students' enrollment ranges from a minimum of 28.2% to a maximum of 69%.

A similar pattern appears in the second year after graduation. In the 2005 cohort, a minimum of 38.5% and a maximum of 73.1% of Original Preuss (N=52) alumni and a minimum of 19.4% and a maximum of 61.3% of Original Comparison alumni (N=31) were attending college. In the 2006 cohort, a minimum of 36.5% and a maximum of 90.3% of Original Preuss (N=52) and a minimum of 19.7% and maximum of 71.8% of Original Comparison students were attending college.

In their third year after graduation, the Original Preuss students in the 2005 cohort attended four-year colleges as opposed to two-year colleges at a higher rate, ranging from a 32.7% minimum to a maximum of 76.8% for the Original Preuss students (N=52) and a range from 16.1% to 58% for the Original Comparison students (N=31). Their rate of overall college attendance (i.e. college v. no college) was quite similar: 55.8% of Original Preuss students and 58.1% of Original Comparison students were attending either a two or four-year college.

¹⁵ If we use the counts of students known to be in college (the minimum estimates), the enrollments of the Original Preuss and Original Comparison groups are significantly different in the 2005 cohort ($p=.02$) but only marginally significant in the 2006 cohort ($p=.064$). Attendance at four-year in contrast to two-year colleges (among those attending college) for the second year after graduation was significantly different for the Original Preuss and Original Comparison students in the 2006 cohort ($p=.004$) but not the 2005 cohort ($p=.072$). At the beginning of the third year after graduation, there was a significant difference ($p=.038$) between Original Preuss and Original Comparison college attendance (at two v. four-year colleges) for the 2005 cohort, but no difference in college v. no college ($p=.511$).

college at higher rates than Original Comparison students but the maximum possible Comparison attendance was higher the minimum Preuss attendance¹⁶, and thus there is some uncertainty about relative outcomes¹⁷.

Thus it appears, based on the present information, that the enrollment and persistence findings presented earlier for the continuous attendance Preuss and continuous attendance Comparison groups are reasonably stable when the analysis is extended to students according to the original lottery assignments. Specifically, the findings are stable with respect to a consistent direction of results in the Original and continuous attendance samples; it is as yet unknown whether the pattern of enrollment and persistence found here reflects the pattern we would find if we had all college-going data.

Two caveats remain. First, we are unable to distinguish between students who are attending college but were not ‘found’ in data searches (the “false negatives”) and students who are, in fact, not attending college. The second caveat is that data may be less complete for students who left the San Diego Unified School District because the linking records for these students are older.¹⁸ In other words, there may be more false negatives in the Comparison group than the Preuss group. We shall continue to try to find ways of increasing the reliability of the data.

Summary

Lottery Students: The Continuous Preuss and Comparison Groups and Original Lottery Assignments

¹⁶ In the combined 2005-2006 sample of Hispanic students in the Original Preuss group (N=57) a minimum of 50.9% and a maximum of 80.7% enrolled in four-year colleges (if we assume that students with no record were actually in four-year colleges), while a minimum of 26% and a maximum of 70% of Hispanic students in the Original Comparison group (N=50) enrolled in four-year colleges.

At the beginning of the second year after high school graduation, a minimum of 36.8% and a maximum of 82.4% of Original Preuss and a minimum of 14% and a maximum of 72% of Original Comparison students were attending a four-year college. Overall college enrollments, meaning enrollment in 2 and four-year colleges in contrast to no college were also higher for Hispanic students in the Original Preuss group, with a confirmed rate of 54.3% and a maximum of 100% in college, and a confirmed rate of 42% and a maximum of 100% of the Original Comparison students in college.

¹⁷ Assuming that the minimum (that is, confirmed) enrollment and attendance figures are accurate, the Original Preuss Hispanic students in the combined 2005-2006 cohorts enrolled in four-year rather than two-year colleges is significantly different than Hispanic students in the Original Comparison group (p=.027), and the same pattern held at the beginning of the second year of college (p=.022). The groups were not significantly different in their enrollment or attendance at college v. no college (enrollments p=.094, year 2 p=.139). Differences were not significantly different for Original Preuss and Comparison African American or Asian American students, possibly due to small sample size.

¹⁸ Name and date of birth are the primary variables used in searches of college records. The name of the most recent secondary school attended may supplement student name and date of birth in some cases. CREATE receives school names from The San Diego Unified School District’s Research and Reporting Division, but does not receive comparable information from other school districts.

Preuss and Comparison Groups: Three findings can be drawn from the comparison of the relative performance of continuous Preuss and continuous Comparison students, those students who were divided by lottery and attended either Preuss or schools in the SDUSD continuously until graduation. The first finding is that Preuss students attend four-year colleges rather than two-year colleges and persist past the freshman year in higher proportions than students in the Comparison group. These differences hold up when minimum and maximum estimates are used, so that the maximum possible four-year enrollments of Comparison students (known enrollment plus all those with no record of enrollment) are lower than the minimum, or confirmed, rates of enrollment for Preuss graduates. The second conclusion is that the rate at which Preuss and Comparison students attend two-year or four-year colleges in contrast to ‘no record of college’ is quite similar.

The third conclusion is that students from both Preuss and Comparison groups who attend CSU campuses leave school at higher rates than do students who attend UC campuses. This may reflect the greater preparation of students attending UC campuses, and it echoes Bowen and Bok’s (1998) observation that students attending more selective universities are more likely to graduate. Bowen and Bok offer three possible explanations for this finding that may account for the Preuss results, *viz.* the greater preparation of students at more selective colleges, the idea that more selective colleges have the financial resources to provide smaller classes and more support services for students, and the idea that students at more selective colleges may have greater persistence because they are more aware of the value of their college degree and the effort it has taken to attend (1998:55-56). In addition, we suggest that the availability of financial support and the expectation of an academically challenging environment may more often accompany attendance at selective colleges and make college graduation more likely.

Original Lottery Assignments: The comparison of students according to their original lottery assignments allows a more stringent measure of the impact of Preuss on college outcomes because it avoids the pitfall of differential attrition, specifically the possibility that academically weaker students might leave a rigorous school and thereby bias the findings.

However, analysis of outcome data using the original lottery assignments supports the findings for the continuous Preuss and continuous Comparison groups. The first two conclusions regarding higher proportion of four-year college attendance by Preuss students and similar rates of two-year and four-year college attendance for Preuss and Comparison students were re-tested by comparing students according to their original lottery assignments. Based on currently available data, the conclusions are stable, and a higher proportion of Original Preuss students attend four-year colleges than do Original Comparison students, differences that are statistically significant. However, in contrast to the findings for the continuous attendance students, the maximum estimates of four-year college attendance for Original Comparison students are higher than the minimum (known) attendance for Original Preuss students, and this introduces an element of uncertainty. Thus caveats remain concerning the completeness of the student data

available and, therefore, the reliability of the information on which these analyses are based.

Another pattern that deserves continued attention is the ethnic shifts in the Preuss student body as students moved from grade to grade. Weiher and Tedin (2002) suggest that concrete choices of charter school selection in Texas were associated with the ethnic composition of the schools: “Whites, African Americans, and Latinos transfer into charter schools where their groups comprise between 11 and 14 percentage points more of the student body than the traditional public schools they are leaving.” Interestingly, parents’ survey response indicated that, to the contrary, race and ethnicity are not important in charter school selection. Hispanic students comprised the majority of students at Preuss and, while some Hispanic students left before graduation, a comparable number of Hispanic students entered Preuss between 6th and 12th grades. In contrast, a substantial proportion of the African American students left Preuss, and there was not a comparable proportion of African American students entering the school after the first admissions. Reasons for these different attrition rates are as yet unknown, but the question deserves further attention. It will also be important to investigate whether the ethnic composition of the sample of students applying to Preuss remains diverse, or whether, over time, students of one background or another are more or less likely to apply.

A related question is whether Preuss is equally effective for all students. Preuss attendance appears to have an impact on four-year college enrollment for Hispanic, African American and Asian American students (there are too few white students to make any guesses about impact) but, based on the admittedly small sample sizes available here, Preuss appears to make the greatest difference for Hispanic students. It would be useful to follow this issue in order to learn what kinds of support are needed to ensure that Preuss reaches all its students.

Conclusions

A RAND report (2009) considers impacts of charter school attendance on achievement in eight states and notes that, in the charter schools included in the study, attending a charter made little difference in students’ standardized test scores. However, they found that charter school students were more likely to graduate and enroll in college than were students attending traditional schools. Similar findings regarding test performance have been observed at Preuss over the years (McClure and Morales 2004, McClure et al 2005, McClure and Reicher 2007, Reicher and McClure 2008). And this present report and an earlier report (McClure et al 2005) find higher rates of four-year college enrollment and second year attendance among Preuss students than Comparison students.

Why might these apparently contradictory findings be so? In other words, why do students who have similar testing records in high school have different college enrollment and persistence records? Do tests poorly represent knowledge or poorly reflect college

entrance criteria? Is what Bourdieu (1985) terms the “institutional” aspect of cultural capital, for example the fulfillment of all college entrance requirements – which is obligatory at Preuss but not at other high schools – most responsible for the higher rates of college attendance? Is the cultural and social capital associated with Preuss attendance more responsible for college-going than the academic supports Preuss provides? These questions will be of continued interest as we follow these students in future years.

Thus far, Preuss students have avoided the ‘achievement trap’ and they enter college at higher rates than similar students assigned by lottery to attend regular schools. The model of a single college track school for low income students with high academic engagement has been successful at increasing enrollment in four-year colleges. It will be important to see whether the pattern of success found here continues through graduation, and whether the college outcomes of Preuss and Comparison students diverge or converge over the course of their college careers. Additionally, it will be important to learn whether the educational model employed here can be adapted to serve students who are less academically prepared and less motivated to succeed, and whether the model can be adapted to the contexts, cultures, and governance structures of other schools. Efforts such as those undertaken at Gompers Charter Middle School and Lincoln High School offer opportunity for further learning about educational change.

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