

SESRC

SOCIAL & ECONOMIC SCIENCES RESEARCH CENTER
PUGET SOUND DIVISION
OLYMPIA, WASHINGTON

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)

By: *SESRC – Puget Sound Division*
 Dave Pavelchek
 Kirby Pitman

July 2008



World Class. Face to Face.

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)

Dave Pavelchek
Kirby Pitman

July 2008



Social & Economic Sciences Research Center-Puget Sound Division
203 E. 4th Avenue, Suite 521
P.O. Box 43170
Olympia, WA 98504-3170
(360) 586-9292
Fax: (360) 586-2279

About SESRC

The Social and Economic Sciences Research Center (SESRC) at Washington State University is a recognized leader in the development and conduct of survey research.

SESRC-Puget Sound Division provides technical services and consultation to assist clients in acquiring data, understanding what data means, and applying that information to solving problems. The SESRC Puget Sound Division specializes in research design, data collection and analysis, using both qualitative and quantitative methods. The Division also provides interpretive reports, policy studies, presentations and consulting services directly to individual clients, organizations and consortia.

Table of Contents

Executive Summary	i
<i>Background.....</i>	<i>i</i>
<i>Method</i>	<i>i</i>
<i>Results.....</i>	<i>i</i>
Introduction.....	1
General Characteristics.....	2
College Enrollment Rates.....	3
<i>Year 1 College Enrollment.....</i>	<i>5</i>
<i>College Enrollment in First Two Years</i>	<i>7</i>
College Persistence Rates	9
<i>Persisting into a Second Year.....</i>	<i>9</i>
Degree and Credential Attainment	11
Conclusion	17
Appendix A	18
<i>Data Table for Year 1 Enrollment by Type of College.....</i>	<i>18</i>
Appendix B	19
<i>Data Table for Credential Attainment by Type of Credential</i>	<i>19</i>

Table of Figures

Figure 1: Characteristics of GEAR UP Participants by Gender & Ethnicity	2
Figure 2: Characteristics of GEAR UP Participants: Graduation Year, GPA & Scholarship Credit Earned	2
Figure 3: GEAR UP College Enrollment by Gender & Ethnicity	3
Figure 4: GEAR UP College Enrollment by Graduation Year & GPA.....	4
Figure 5: GEAR UP and Statewide FRPL Year 1 College Type by Race & Gender.....	5
Figure 6: GEAR UP Year 1 College Type by Graduation Year and GPA	6
Figure 7: GEAR UP and Statewide Year 1 or Year 2 College Enrollment by Gender & Race	7
Figure 8: Year 1 or Year 2 College Enrollment by Graduation Year & GPA.....	8
Figure 9: Percent of Year 1 Students also Enrolled in Year 2 by Gender & Ethnicity	9
Figure 10: Percent of Year 1 Students also Enrolled in Year 2 by Graduation Year & GPA	10
Figure 11: Type of College Degree Earned by Gender & Ethnicity.....	11
Figure 12: Type of College Degree Earned by Graduation Year & GPA	12
Figure 13: College Degree Earned by Gender & Ethnicity – All Students	13
Figure 14: Bachelor’s Degrees by Gender & Ethnicity – All Students	14
Figure 15: Associate’s Degrees by Gender & Ethnicity – All Students	14
Figure 16: Other Credentials by Gender & Ethnicity – All Students	15
Figure 17: Percent of Year 1 Students also Enrolled in Year 2 by Degree Earned	16

EXECUTIVE SUMMARY

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)

**By: Dave Pavelchek and Kirby Pitman
Social & Economic Sciences Research Center, Puget Sound Office
Washington State University
July 2008**

BACKGROUND

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) is a federal initiative that provides matching grants to high-poverty middle and high schools, and college scholarships to low-income students with the goal of increasing the number of low-income students who enter and succeed in postsecondary education.

METHOD

This report analyzes outcomes of Washington State GEAR UP students who earned scholarship credits prior to graduating in the 2000-2001, 2001-2002, and 2002-2003 school years. During their high school years, students “earned” scholarship credit through participation in GEAR UP program activities. The analysis focuses on 348 students who earned scholarship credit through the program.

A range of measures of college enrollment, persistence and credential completion were computed for five years after high school graduation.

For comparison purposes, where available, parallel statistics have been included for a statewide population of low income students – 2003 graduates who participated in the Free and Reduced Price Lunch program.

RESULTS

Contrasting GEAR UP participants with a comparison group of other low-income students, as has been done in other program analyses, GEAR UP students have more positive outcomes on virtually all measures of enrollment, persistence, and degree attainment. For example, first year college attendance for male GEAR UP participants was 50% higher than in the comparison group – including 100% higher four-year college attendance. This pattern of positive differences prevails not only for GEAR UP students as a whole, but for subpopulations by ethnicity and gender as well.

INTRODUCTION

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) is a federal initiative that provides matching grants to education/community partnerships and states to increase the number of low-income students who are prepared to enter and succeed in postsecondary education. The Washington State GEAR UP provides services to individuals and student cohorts at high-poverty middle and high schools, and college scholarships to low-income students.

This report analyzes student outcomes from three of the early cohorts of participating students, those graduating in the 2000-2001, 2001-2002, and 2002-2003 school years. These students “earned” scholarship credit through participation in GEAR UP program activities prior to graduation.

- During those program years, a total of 460 students graduated after participating in GEAR UP. This included 112 students who earned little or no scholarship credit due to low levels of participation in GEAR UP activities. After describing the overall demographics of program participation, this analysis focuses on the remaining 348 students who actively participated in the program and earned scholarship credits.
- Data on college enrollment for the five years¹ following graduation was compiled from National Student Clearinghouse records for all three cohorts.
- For several of the outcome indicators, statewide comparison numbers are provided by gender, and ethnicity.² All statewide comparison numbers were calculated from the Washington public high school graduating cohort of the 2002-2003 year – the same year in which the last of the three GEAR UP cohorts graduated. The comparison statewide numbers include only those students who participated in the Free and Reduced Price Lunch program. The USDA’s Free and Reduced Price Lunch program (FRPL) provides an indicator of lower income status. To qualify for the program students’ families must meet income eligibility requirements. Not all students who are eligible to participate, therefore, the comparison group of FRPL students is a non-random sample of the low-income population. The comparison cohort included 8,948 low income students.³

¹ The followup period included 21 quarters after graduation.

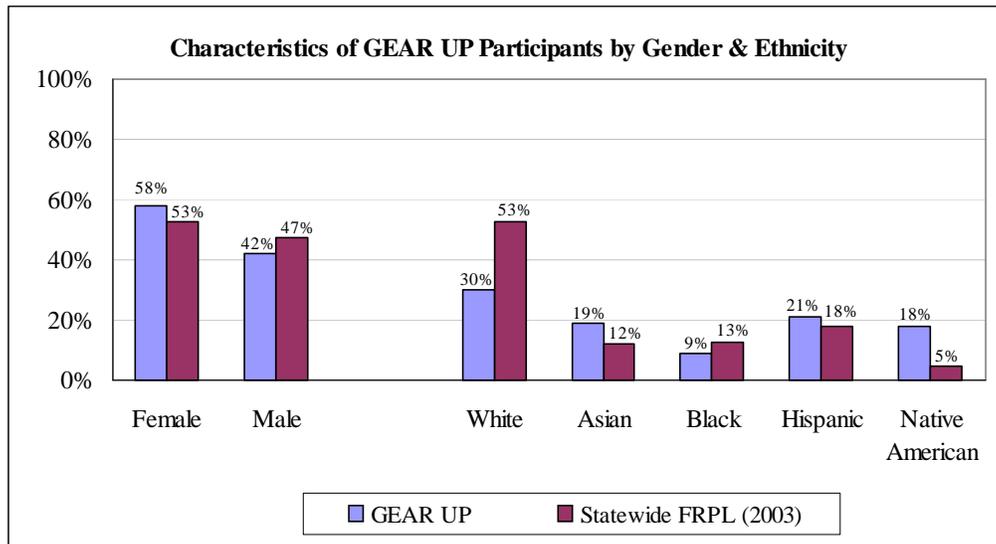
² The number of black students among the GEAR UP participants is small, and interpretation of data about them should be made with extreme caution.

³ In addition to the low-income students graduating with a traditional diploma in that year, the comparison group includes a relatively small number of students from the same cohorts who completed via GED programs, high school completion programs, or received IEP diplomas.

GENERAL CHARACTERISTICS

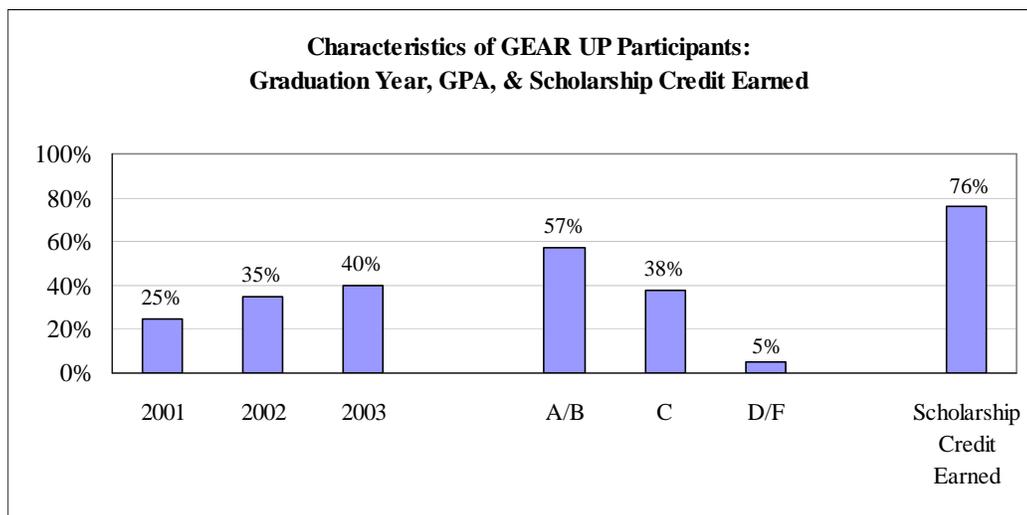
The proportion of females participating in GEAR UP was larger than those in the FRPL program (58% compared to 53%). In terms of ethnicity, GEAR UP students had a much larger proportion of minority students than graduates statewide. White students were still the largest group who participated in GEAR UP, but at a much lower rate than Statewide FRPL students (30% compared to 53%). Relative to their proportion in the statewide FRPL cohort, Native American, Asian and Hispanic students participated at a higher rate, and Black students participated at a lower rate.

Figure 1



The majority of GEAR UP students (57%) graduated high school with a cumulative GPA of A or B, and only five percent averaged a D or F. The majority of the participants earned scholarship credit (76%).

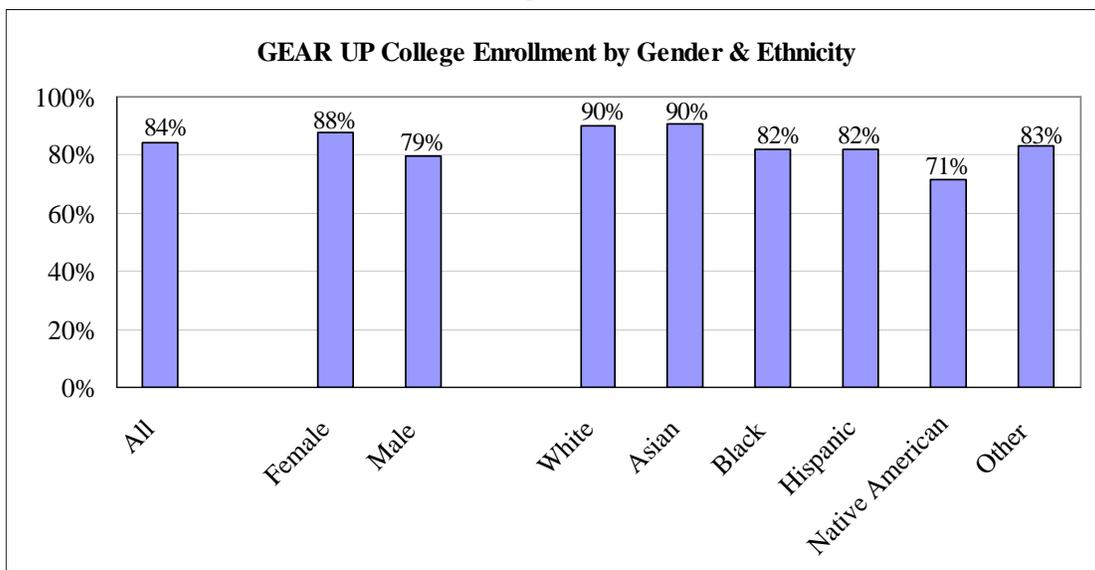
Figure 2



COLLEGE ENROLLMENT RATES

Several different measures of college attendance were compiled for the 348 students who earned scholarships. In the broadest measure, college enrollment was defined as taking at least one college course in the five years of post high school follow-up (21 quarters). Overall, 84 percent of the GEAR UP students enrolled in college at some point in the five years after high school graduation.⁴ The differences in enrollment rates by gender were statistically significant.⁵ Females were more likely than males to attend college (88% compared to 79%). Asian (90%) and White students (90%) were the most likely to continue on to college and Native American students were the least likely (71%).

Figure 3



Subgroup Sizes

All	Gender		Ethnicity					
	Female	Male	White	Asian	Black	Hispanic	Native American	Other
348	197	151	82	73	28	83	56	12

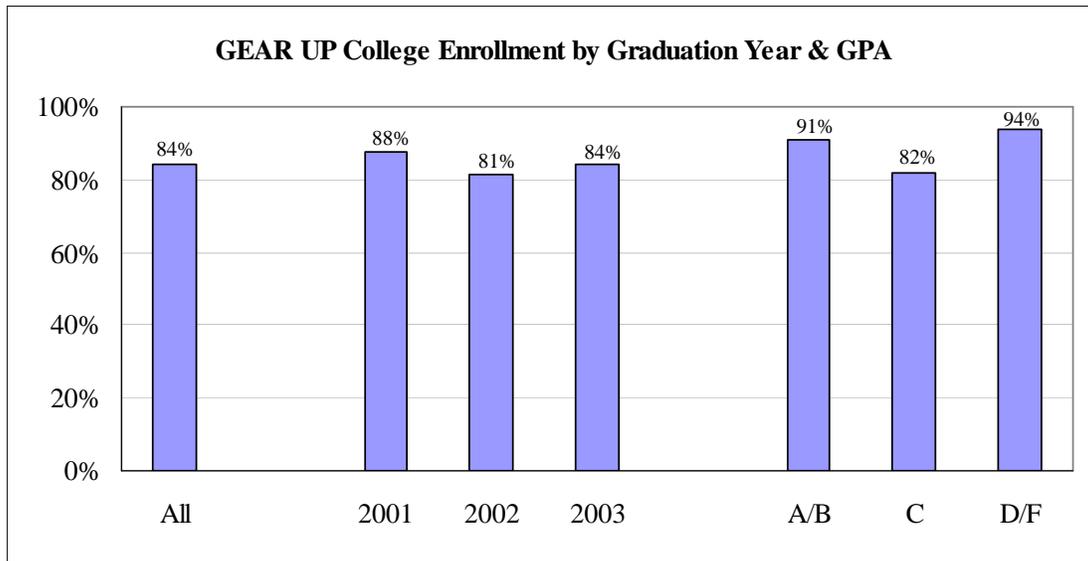
NOTE: There were 14 students with no ethnicity information.

⁴ Washington State has several different programs under which high school students can enroll in college courses before graduation, and some GEAR UP students participated in these programs. Seven GEAR UP students earned college credit while in high school but did not enroll in college after high school graduation. These students are not included as “enrolled in college” in these statistics.

⁵ Differences reported in the text as statistically significant refer to the 95% confidence level unless otherwise noted. “Statistically significant” means the differences between groups are very likely to be real and not just due to chance. Some differences may appear large enough to be significant, but because of small sample sizes, do not meet statistical significance criteria.

Students at all GPA levels were equally likely to enroll in college. However, the low number of students earning a D or F average is quite small (n=17), so few conclusions can be drawn about this group.

Figure 4



Subgroup Sizes

All	Graduation Year			GPA		
	2001	2002	2003	A/B	C	D/F
348	104	118	126	179	116	16

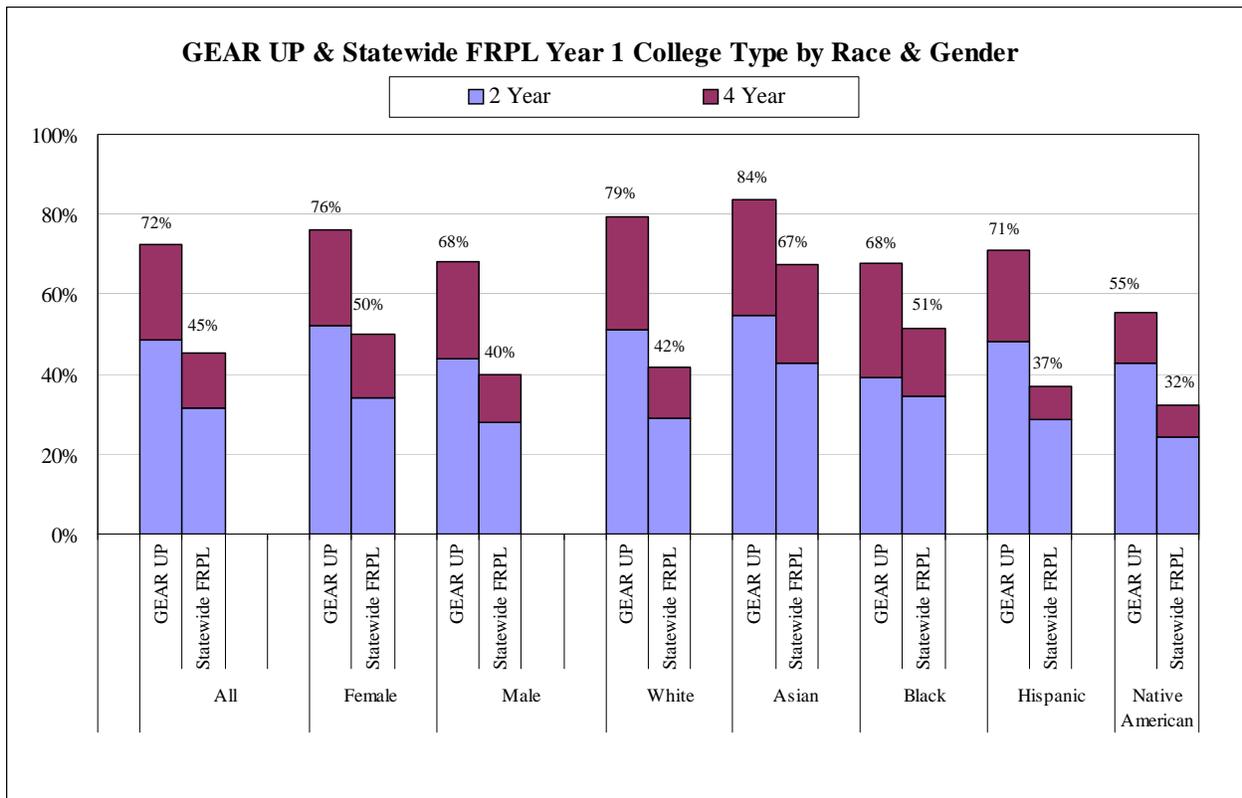
NOTE: There were 18 students with no GPA information

YEAR 1 COLLEGE ENROLLMENT

The chart below shows the enrollment rates in the first year after high school graduation, by type of college attended (two-year versus four-year). Overall, GEAR UP students attended college in the year after high school at a much higher rate than the FRPL cohort (72% compared to 45%). Among GEAR UP students, the differences by ethnicity were statistically significant. Asian students had the highest enrollment rate (84%) and Native Americans had the lowest (55%). Overall, within each ethnic group GEAR UP students were more likely to attend college than FRPL students statewide. Proportionately among ethnic groups, these differences are larger for whites and Hispanics, and smaller among Asians. There are also differences in how the overall differences in enrollment were distributed between enrollment in 2-year and 4-year institutions. Proportionately, the difference enrollment rate at 4-year institutions was larger for males than for females. There were also 2-year/4-year differences by ethnic group – See Appendix A for data including difference ratios.

Enrollment rates at four-year colleges and universities were also higher for the GEAR UP participants, particularly among male, White and Hispanic students.

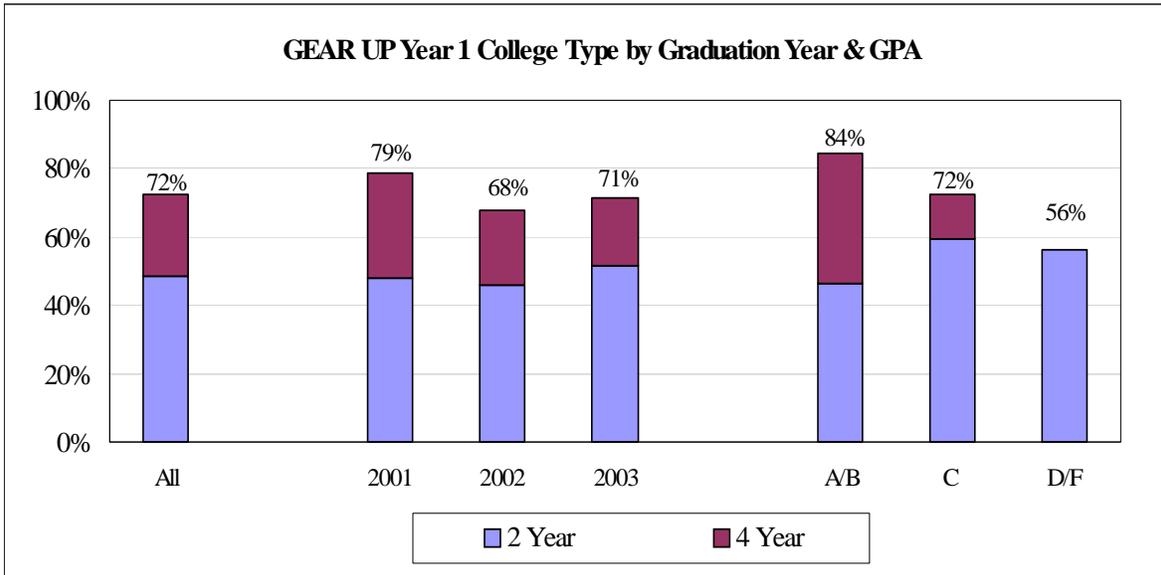
Figure 5



Note: See Appendix A for Data Table

Differences in enrollment rates were statistically significant among GEAR UP participants by cumulative GPA. Participants with A, B or C cumulative GPAs in high school were more likely to attend college right after high school than those earning a D or F. Attendance at four-year schools is even more strongly associated with GPA than overall college enrollment.

Figure 6



Subgroup Sizes

All	Graduation Year			GPA		
	2001	2002	2003	A/B	C	D/F
348	104	118	126	179	116	16

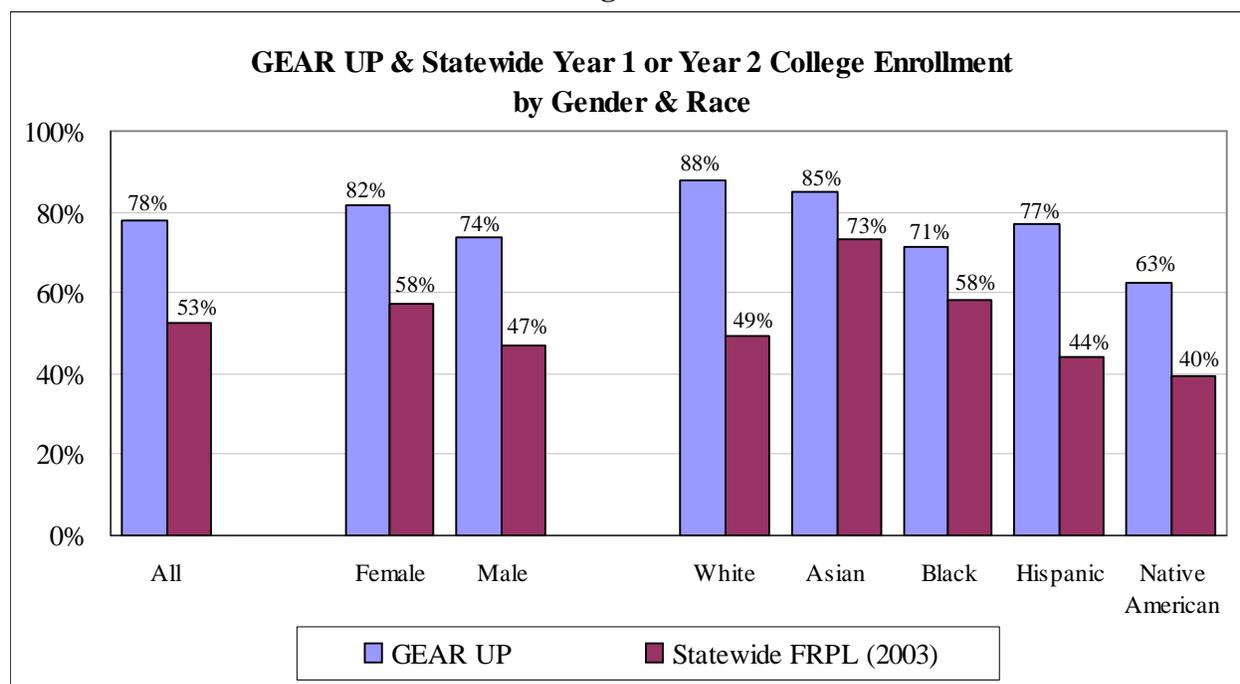
NOTE: GPA unavailable for 37 students.

COLLEGE ENROLLMENT IN FIRST TWO YEARS

Because some recent graduates delay their initial enrollment in college until the second academic year, enrollment data was also analyzed for this longer span. Since delayed enrollment drops off substantially after the first two years, this captures the great majority of students who transition to college soon after graduation. Students are included if they enrolled for one or more quarters or semesters during those first two years.⁶

The differences between GEAR UP participants and the comparison group that occurred in first year enrollment were also noticeable in cumulative enrollment over two years, with proportionately larger differences for Whites and Hispanics, and a proportionately smaller difference for Asians.

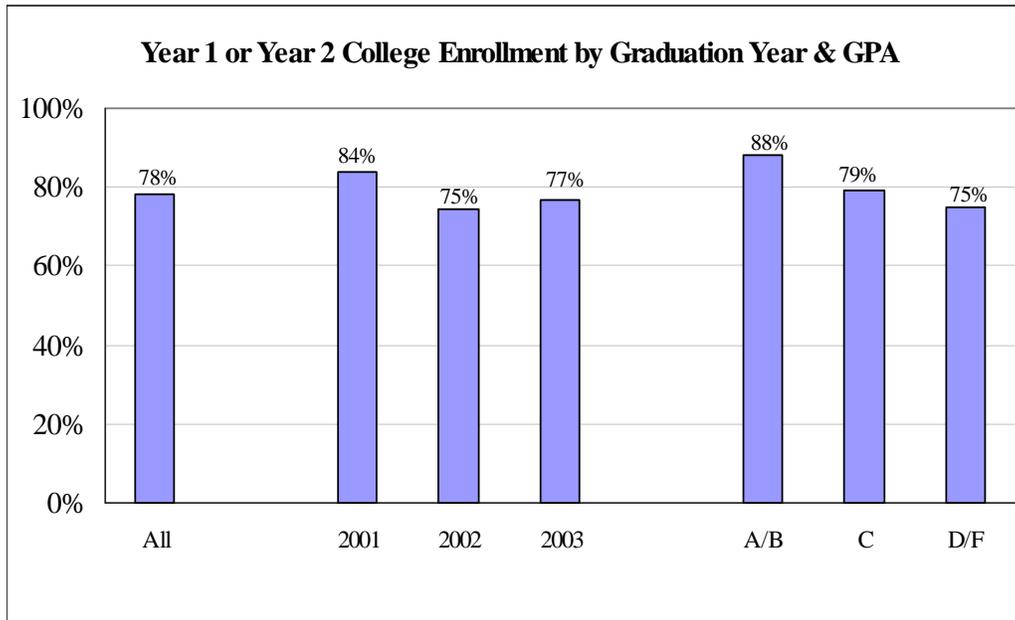
Figure 7



⁶ Subgroup sizes are the same as in the previous section.

The differences in enrollment rates by GPA were statistically significant. Students with higher grades were more likely to attend college than those with lower grades. However, three-quarters or more of the students in each GPA level attended college within the first two years.

Figure 8



COLLEGE PERSISTENCE RATES

Beyond whether or not students enroll in college, the ability of students to progress in the postsecondary environment is a major predictor of later success. Many students do not proceed to degree completion in the “normal” two or four year span, but succeed nevertheless so long as they remain engaged and continue to make educational progress.

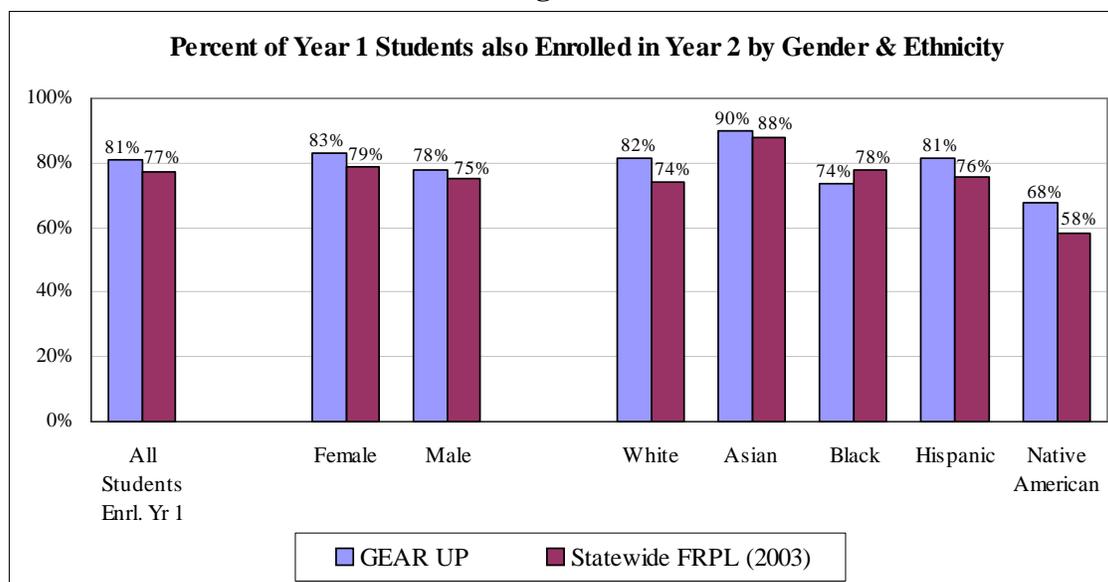
A later section approaches this question through credential attainment rates. However, since median times to baccalaureate degrees are now significantly longer than the five years of follow-up data available for the 2003 cohort, other measures were needed.

A major portion of the risk of disengagement from higher education occurs in the transition from the first to second year of college. Therefore, whether or not students return for a second year of college was used as the second indicator of successful college preparation.

PERSISTING INTO A SECOND YEAR

College dropout rates are highest during the first year. Therefore, persistence into a second year of enrollment is a key step toward eventual success in college. Of the students who enrolled in college their first year post high school, 81 percent (204 out of 252) also enrolled in the subsequent year. Differences among ethnic groups within the GEAR UP cohort were statistically significant.

Figure 9



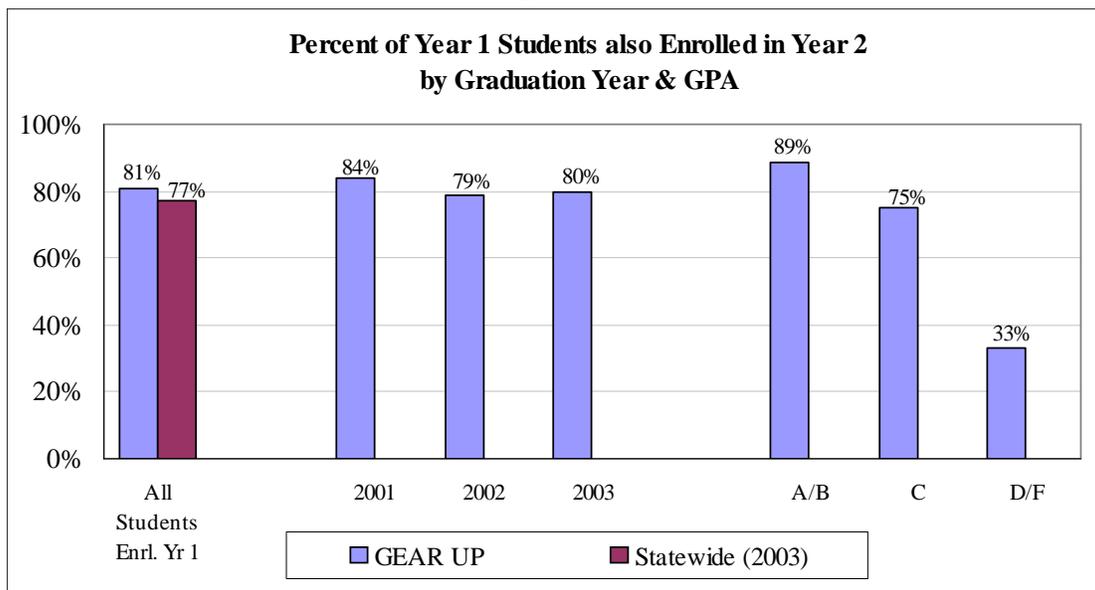
Subgroup Sizes

Total	Gender		Ethnicity				
	Female	Male	White	Asian	Black	Hispanic	Native American
252	149	103	65	61	19	59	31

NOTE: There were 17 students with no ethnicity information.

Persisting into a second year of enrollment declined markedly for students with lower cumulative GPAs.

Figure 10



Subgroup Sizes

Total	Grad Year			GPA		
	2001	2002	2003	A/B	C	D/F
252	82	80	90	151	84	9

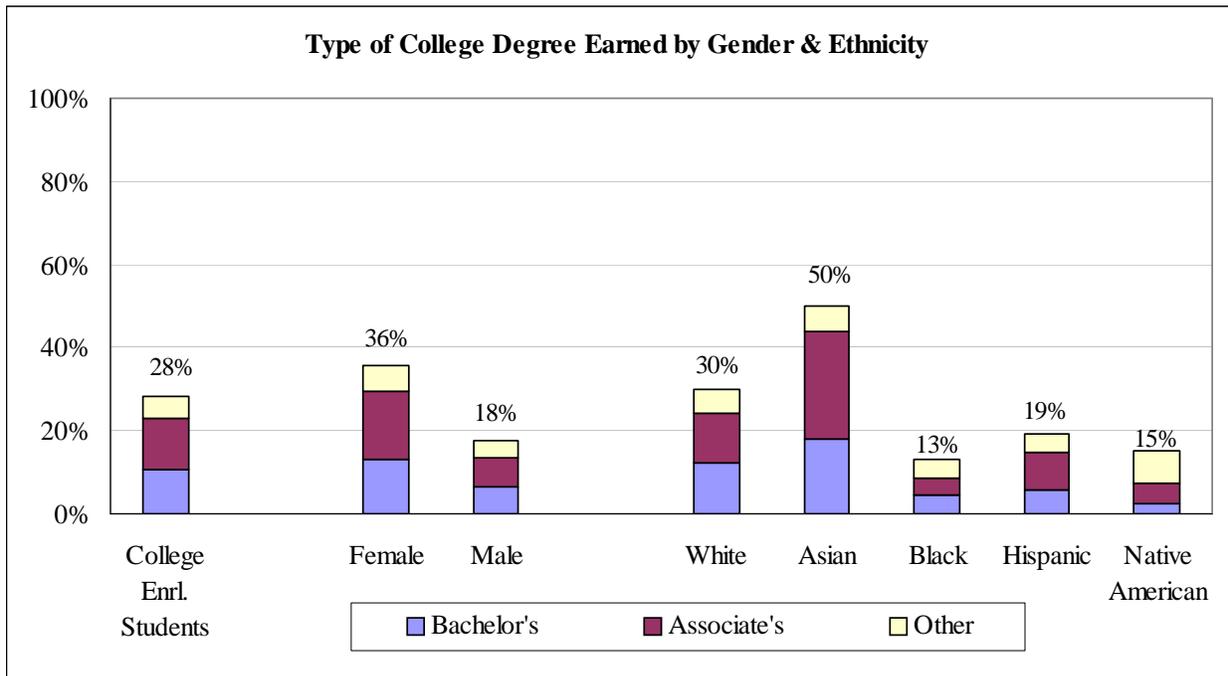
NOTE: There were 8 students with no GPA information.

DEGREE AND CREDENTIAL ATTAINMENT

Degree attainment data were also analyzed, even though at five years after graduating from high school, many students are legitimately still well engaged in higher education, but have not yet completed a first credential.

Postsecondary credentials earned by GEAR UP students were grouped into three categories: four-year Bachelor’s degrees, two-year Associate’s degrees, and other credentials, which included mostly certifications awarded by community and technical colleges. Of those students who enrolled in college, 28% earned a credential, with the majority being Associate’s degrees.⁷ The differences by gender were statistically significant. Of those enrolled in college, 36 percent of females earned a degree compared to 18 percent of males. Attainment of Bachelor’s’ degrees and “other” credentials did not vary greatly by gender, but females earned Associate’s degrees at far higher rates than males. The differences in type of degree earned by ethnicity were not statistically significant, probably due to the small number of students in each group.

Figure 11



Subgroup Sizes of Students Enrolling in College

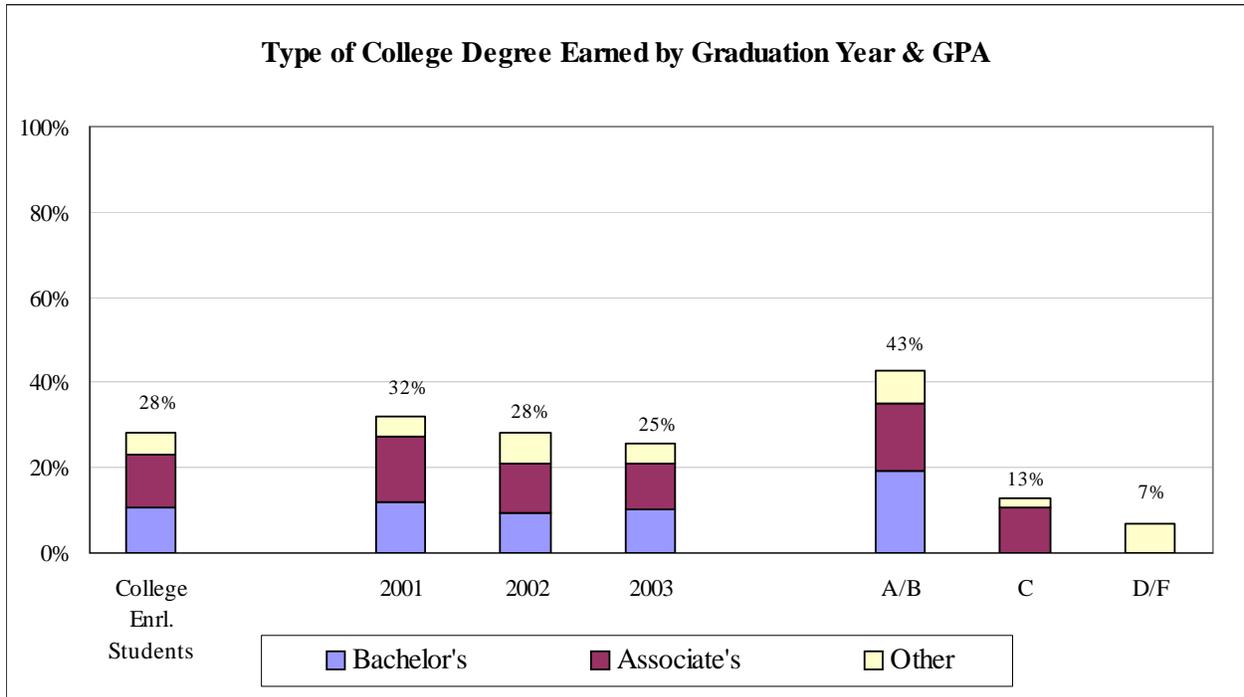
Total	Gender		Ethnicity				
	Female	Male	White	Asian	Black	Hispanic	Native American
293	173	120	74	66	23	68	40

NOTE: There were 22 students with missing ethnicity information.

⁷ Students who attained multiple credentials were counted at the “highest” level of credential they received. Thus, some of those counted as achieving baccalaureate degrees had also earned Associate’s degree en route, but are not double counted in the Associate’s degree data.

Students enrolled in college who earned a cumulative high school GPA of A or B were more likely to earn degrees than those with lower GPAs.⁸ The largest proportion of those degrees were Bachelor's degrees. College enrolled students with a high school GPA of C tended to earn an Associate's degree when they earned a degree

Figure 12



Subgroup Sizes

Total	Graduation Year			GPA		
	2001	2002	2003	A/B	C	D/F
293	91	96	106	163	95	15

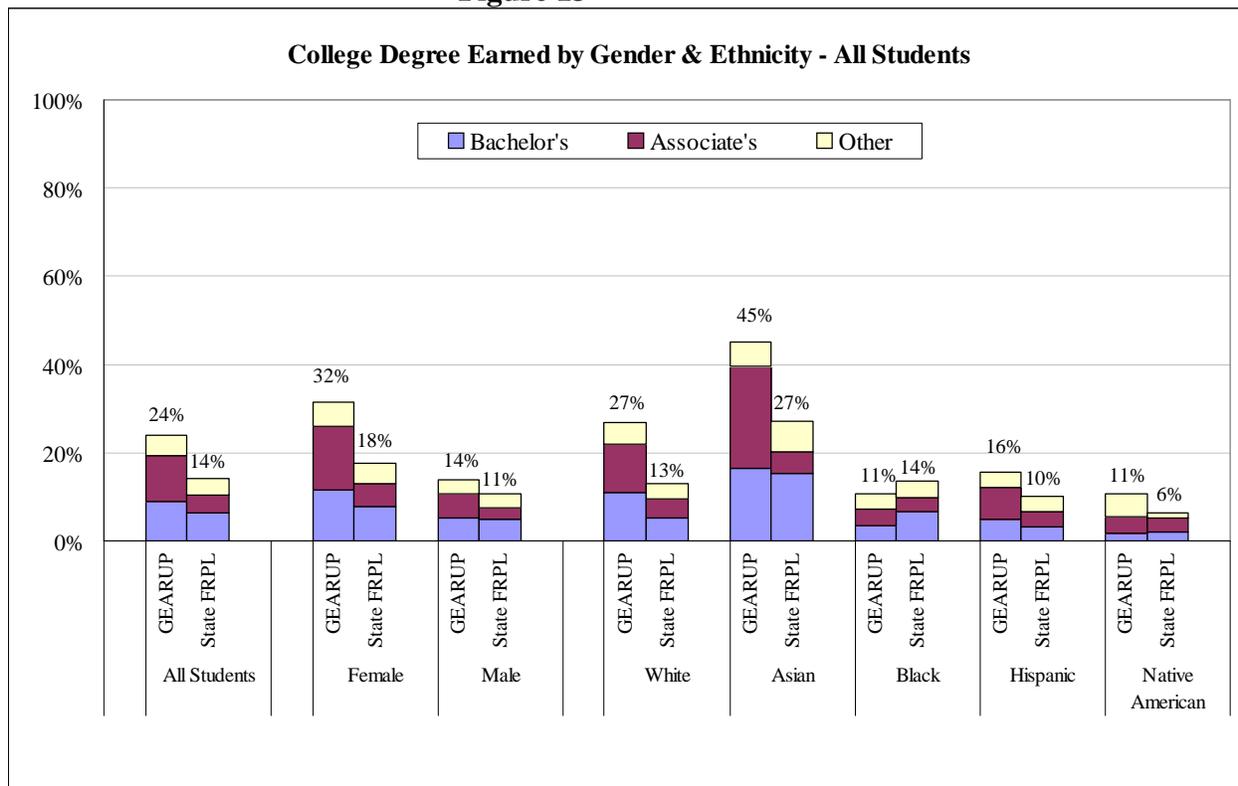
The degree completion rate over the same follow-up period among the statewide FRPL cohort was four percentage points lower (24%). A near doubling of the proportion of GEAR UP students attaining Associate's degrees accounts for most of the difference.

However, this comparison understates the extent of the difference between these two groups - because GEAR UP students not only completed degrees more often if they attended college, but also attended college at a higher rate.

⁸ Statistically significant.

When the proportion of graduates attaining a credential within 5 years is compared between GEAR UP students and the statewide FRPL graduates, the differences are much larger, with about 10% more GEAR UP students overall attaining college credentials.⁹ By subpopulation, the greatest proportionate differences are for whites and females.

Figure 13



Subgroup Sizes

Total	Gender		Ethnicity					
	Female	Male	White	Asian	Black	Hispanic	Native American	Other
348	197	151	82	73	28	83	56	12

NOTE: There were 14 students with missing ethnicity information.

See Appendix B for data table.

By credential type, the largest difference is 150% more Associate's degrees among the GEAR UP students, contrasting with rate differences of 40% in Bachelor's degrees, and 19% in other credentials. Differences were about twice as large for female students as for males.

⁹ The percentages of students completing credentials drops from the previous graphs (from 28% to 24%) due to including students who never enrolled in college in the denominator.

There were noticeable differences by gender and ethnicity in the pattern of differences in rates of attaining different types of credentials, though for statistical purposes, the size of some of the minority populations in the GEAR UP cohort is quite small. See Appendix B for table of ratios and subgroup sizes.

Figure 14

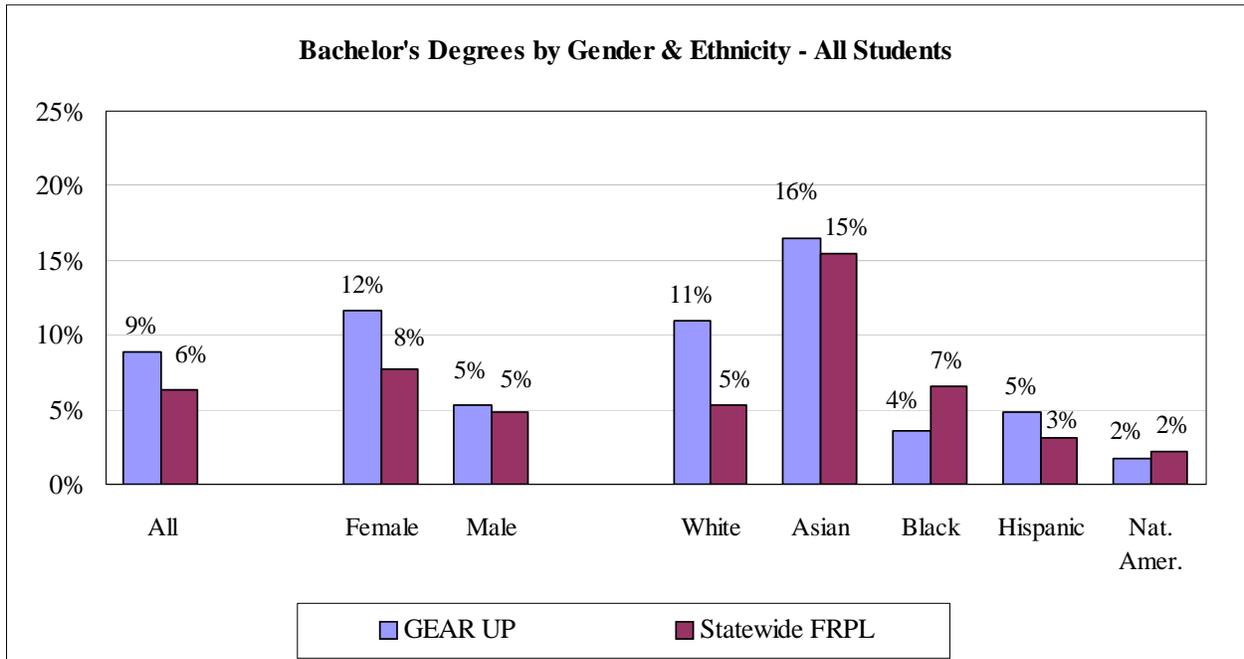


Figure 15

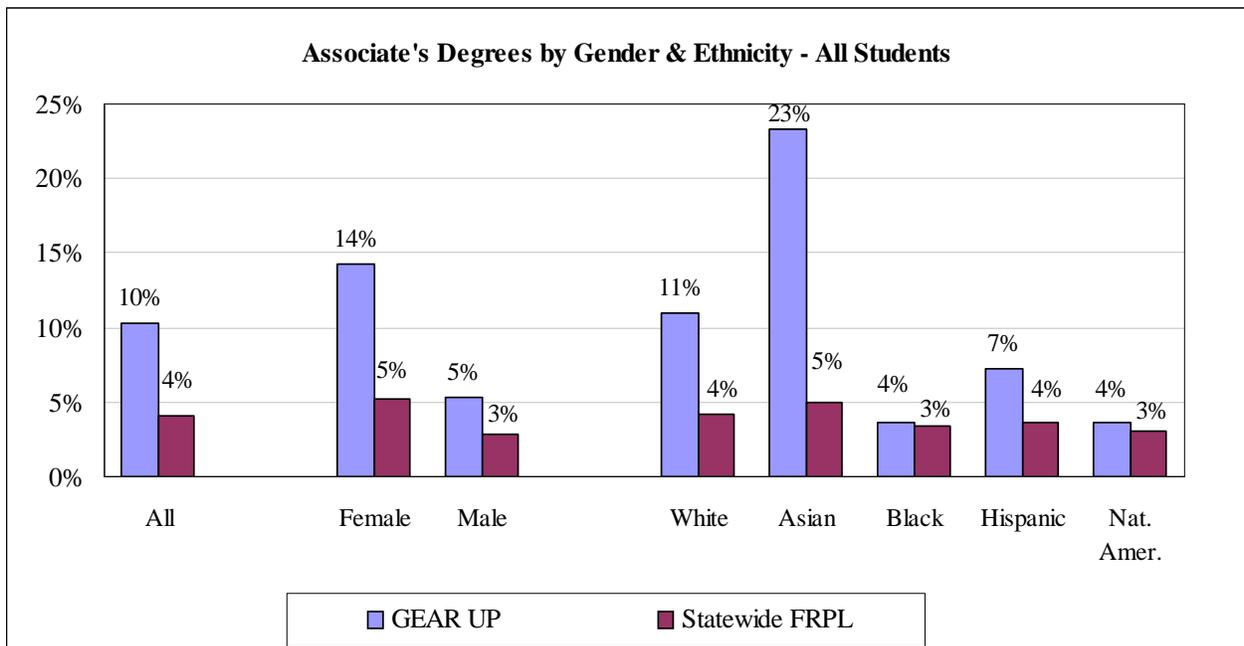
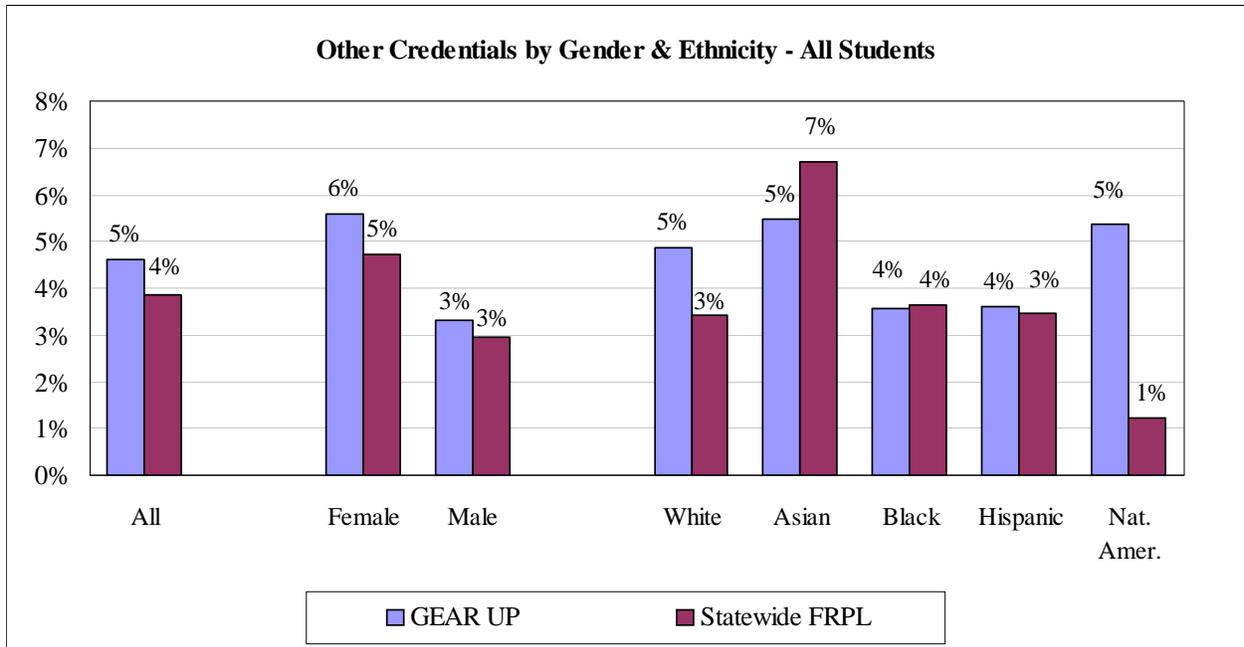
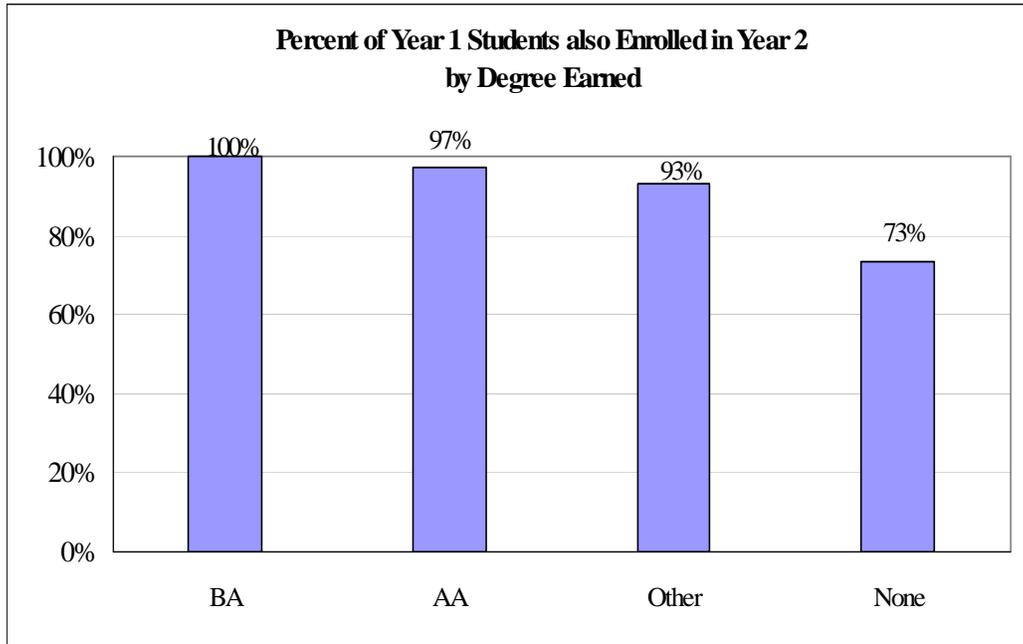


Figure 16



Examining the relationship between degree attainment and returning for a second year of college supports the significance of first-year persistence as a predictor of success. None of the students who eventually completed a baccalaureate degree had failed to return for their second year.¹⁰

Figure 17



Subgroup Sizes

Total	BA	AA	Other	None
252	29	35	15	173

¹⁰ Analysis limited to students starting college in the year following graduation.

CONCLUSION

Contrasting GEAR UP participants with a comparison group of other low-income students, as has been done in other program analyses, GEAR UP students have more positive outcomes on virtually all measures of enrollment, persistence, and degree attainment.

This pattern of positive differences prevails not only for GEAR UP students as a whole, but in most instances, for subpopulations by ethnicity and gender as well.

- First year college enrollment rates were substantially higher. Both male and female GEAR UP students enrolled in 2 year colleges at rates 50% higher than the comparison groups. Four year college enrollment for GEAR UP male students was double the comparison group rate, while enrollment for female GEAR UP students in 4 year colleges was 50% higher than in the comparison group.
- GEAR UP students persisted into the second year of college at higher rates than the comparison group by about four percentage points – equivalent to about a one-sixth reduction in first year college dropout rate.
- Credential attainment within the five year period was proportionately greater among the GEAR UP students than in the comparison cohort, by over 65%. The differences between GEAR UP students and the comparison group were about twice as large for completion of Associate's degrees as they were for Bachelor's degrees.

APPENDIX A

DATA TABLE FOR YEAR 1 ENROLLMENT BY TYPE OF COLLEGE

	All		Gender				Ethnicity									
			Female		Male		White		Asian		Black		Hispanic		Native American	
	GEAR UP	Statewide FRPL	GEAR UP	Statewide FRPL												
Percents																
2 Year	49%	31%	52%	34%	44%	28%	51%	29%	55%	43%	39%	34%	48%	28%	43%	24%
4 Year	24%	14%	24%	16%	24%	12%	28%	13%	29%	25%	29%	17%	23%	8%	13%	8%
Total	72%	45%	76%	50%	68%	40%	79%	42%	84%	67%	68%	51%	71%	37%	55%	32%
Subgroup Sizes																
2 Year	169		102		66		42		40		11		40		24	
4 Year	83		47		36		23		21		8		19		7	
Total	348		197		151		82		73		28		83		56	
Ratios of GEAR UP Rates to Comparison Group Rates																
2 Year	1.55		1.53		1.57		1.77		1.28		1.15		1.69		1.77	
4 Year	1.71		1.5		2		2.2		1.17		1.66		2.71		1.57	
TOTAL	1.60		1.52		1.70		1.88		1.25		1.33		1.92		1.72	

APPENDIX B

DATA TABLE FOR CREDENTIAL ATTAINMENT BY TYPE OF CREDENTIAL

	All		Gender				Ethnicity									
			Female		Male		White		Asian		Black		Hispanic		Native American	
	GEAR UP	Statewide FRPL	GEAR UP	Statewide FRPL												
Percents																
4 Year	9%	6%	12%	8%	5%	5%	11%	5%	16%	15%	4%	7%	5%	3%	2%	2%
2 Year	10%	4%	14%	5%	5%	3%	11%	4%	23%	5%	4%	3%	7%	4%	4%	3%
Other Credential	5%	4%	6%	5%	3%	3%	5%	3%	5%	7%	4%	4%	4%	3%	5%	1%
Total	24%	14%	31%	18%	14%	11%	27%	13%	45%	27%	11%	14%	16%	10%	11%	6%
Subgroup Sizes																
4 Year	31		23		8		9		12		1		4		1	
2 Year	36		28		8		9		17		1		6		2	
Other Credential	16		11		5		4		4		1		3		3	
Total Credentials	83		62		21		22		33		3		13		6	
Total	348		197		151		82		73		28		83		56	
Ratios of GEAR UP Rates to Comparison Group Rates																
4 Year	1.40		1.51		1.10		2.09		1.07		0.55		1.53		0.83	
2 Year	2.55		2.75		1.88		2.61		4.68		1.06		2.02		1.16	
Other Credential	1.19		1.19		1.13		1.43		0.82		0.98		1.04		4.37	
TOTAL	1.67		1.79		1.31		2.08		1.67		0.79		1.53		1.66	