

POSTSECONDARY OPPORTUNITY AND ACHIEVEMENT IN WASHINGTON

May 2001

EXECUTIVE SUMMARY

BACKGROUND

Since its inception, the Higher Education Coordinating Board (HECB) has been committed to providing higher education opportunity for all Washington citizens and to promoting achievement among all those who begin their studies.

The HECB is also charged by state law with “monitoring and reporting on the progress of minority participation in higher education,” and making recommendations “to increase minority participation” (RCW28B.80.350). In December 1999, Board members directed the agency staff to conduct a comprehensive review of its work in meeting this responsibility. In the spring of 2000, two advisory groups were convened to assist in this effort. This report, *Postsecondary Opportunity and Achievement in Washington*, is the result of that review.

OVERVIEW

The report provides a broad overview of postsecondary opportunity and achievement in the state of Washington. It poses three questions: 1) Who is ready for postsecondary education? 2) Who begins postsecondary education? and 3) Who completes postsecondary education? The report aims to inform thinking about the conditions that lead to opportunity and achievement, and to focus attention on important problems and accomplishments. Research-based conclusions and policy recommendations to broaden opportunity and strengthen achievement will follow.

The data in this report are drawn from the administrative records of Washington’s public high schools, community and technical colleges, and public universities. Some data also were collected about students enrolled in private vocational schools, colleges, and universities. Because each institution collects data slightly differently, the data provides a series of snapshots of student participation and achievement in Washington.

KEY FINDINGS

Who is Ready for Higher Education?

- About 17 percent of public high school students do not graduate. Among African American, Native American, and Hispanic students this rate is far higher, ranging from 27 to 36 percent.
- Many who do graduate are ill-prepared for postsecondary education. Of those who continue directly from high school to college, just over one-third will take a remedial course in their first year of schooling.

- Academic preparation is lagging among Native American, African American, and Hispanic students. Among the latter two groups, one-half will enroll in a remedial course as first-year college students.
- A small proportion of Hispanic and Native American seniors are completing a required step for university entry, taking a college entry examination (the SAT or ACT). While Hispanic and Native American students comprised six and two percent of Washington public high school seniors, respectively, they took only three and one percent of the SAT examinations in Washington. The proportion of white and Asian/Pacific Islander test-takers matched or exceeded the proportion of high school seniors.

Who Begins Higher Education?

- More than six out of ten high school graduates continue directly to postsecondary education.
- Rates of continuation from high school to all types of postsecondary education and training are not sharply lower for African American, Native American, or Hispanic students than for whites. This achievement is due to the broad and open access afforded by the state's community and technical colleges.
- Thirty-two percent of white high school graduates continue directly to Washington community and technical colleges compared with 33 to 36 percent of Native American, African American, Hispanic, and Asian/Pacific Islander graduates.
- Thirty-five percent of Asian/Pacific Islander high school graduates continue directly to baccalaureate education. A smaller share of white (23 percent) and African American (21 percent) high school graduates make a direct transition from high school to a four-year college or university. Native American and Hispanic high school graduates, at 17 and 16 percent, are least likely to continue directly from high school to a four-year school.
- Taking a longer view of students' careers – examining high school completion and postsecondary entry – yields a less promising picture of higher education participation. Only one-half (52 percent) of all high school freshmen will enroll five years later in postsecondary education or training. Rates are even lower for African American, Native American, and Hispanic high school freshmen (40, 36, and 32 percent).

Who Completes Higher Education?

- Within six years of beginning their studies, 45 percent of African American students, 49 percent of Native American students, and 53 percent of Hispanic students will complete their degrees at the public university where they began. Completion rates for white and Asian/Pacific Islander students (60 and 64 percent, respectively) are moderately higher.

- Rates of completion among African American and Native American students enrolled in community and technical colleges are low. Eight percent of African-American students and 15 percent of Native American students will complete their degree within three years of first enrolling. Completion rates for Hispanic, white, and Asian/Pacific Islander students range from 20 to 26 percent.

In Washington and throughout the nation, access and completion in higher education are inversely related. Open entry policies provide opportunity for all learners, including many with modest academic preparation. Because students who begin college with academic deficiencies are less likely to finish their studies, institutions with open enrollment policies will be marked by lower levels of completion than those that are selective.

Entrance requirements ensure moderately high levels of academic preparation among first-time students at public universities. Among students who enroll directly from high school, 17 percent of baccalaureate students will take remedial coursework in their first year compared to 52 percent of community and technical college students.

Implications

In Washington we are faced with three principal challenges: 1) broadening the pipeline of students who are prepared to enter and succeed in higher education; 2) ensuring adequate access to selective institutions; and 3) turning access into achievement at open enrollment institutions.

Next Steps

The HECEB will meet with universities, colleges, and other governing agencies to review this diagnosis of opportunity and achievement, and to plan a collaborative research agenda. This research will be completed in 2002, and will lay the foundation for policy proposals offered in the 2003 legislative session. Below are some of the initial questions that might be addressed.

Broadening the Pipeline of Students

- Are students who succeed under standards-based education reform (e.g., who meet Washington Assessment of Student Learning standards) more likely to enroll and succeed in postsecondary education and training than those who do not?
- What proportion of students who are ill-prepared for postsecondary education are being served by targeted early intervention programs? Are these programs boosting students' educational aspirations, academic readiness for postsecondary education, or participation and achievement in postsecondary education?

Ensuring Adequate Access to Public Universities

- Are minimum entry qualifications for public universities predictive of student success? How successful are students admitted in exception to these policies?
- Is there a pool of students who are qualified for entry to public universities who are choosing not to seek entry? Is there a pool of students who are nearly qualified for university entry and might become qualified with additional support and information?

Turning Access into Achievement in Open Enrollment Institutions

- What factors explain successful student outcomes? Why are completion rates for some students substantially lower than for others?

POSTSECONDARY OPPORTUNITY AND ACHIEVEMENT IN WASHINGTON

May 2001

BACKGROUND

RCW 28B.80.350(11) directs the Higher Education Coordinating Board (HECB) to “make recommendations to increase minority participation, and monitor and report on the progress of minority participation in higher education.”

In January 1991, the Higher Education Coordinating Board adopted goals for student enrollment, retention, and completion, faculty and staff employment, and institutional climate. In addition, it resolved to “annually monitor and report progress made towards these goals” (Resolution 91-5).

In March 1996, the Board revised the agency's policy on minority participation and diversity. The five goals adopted in 1991 were continued and twenty sub-goals were added.

In December 1999, the Board adopted Resolution 99-46. This resolution adopted the 1999 report, “*Diversity and Participation of People of Color in Higher Education*,” and directed the staff to update the 1999 study. In addition, Resolution 99-46 directed the staff to “conduct a comprehensive review of statewide goals for the participation of people of color.”

In the spring of 2000, the HECB staff convened two advisory groups to review the agency's existing reporting framework. Drawing upon participant suggestions and subsequent Board discussions, HECB staff proposed a new framework, described below, for monitoring diversity in higher education.

THE NEW FRAMEWORK

Participants in the advisory groups consistently recommended that the HECB expand its focus to include the “pipeline” of student progress and preparation at the K-12 level, since access to postsecondary education and training hinges upon successful pre-college preparation.

- *Opportunity and Achievement* focuses on the entire span of students' careers – from pre-college preparation to postsecondary participation and on to degree/certificate completion.

The HECB's previous reporting framework included some policy targets that were outside its purview, such as college and university curriculum, and institutional staff and faculty hiring decisions.

- *Opportunity and Achievement* addresses three state-level policy goals – readiness, participation, and achievement.

The HECB should focus on expanding postsecondary learning opportunities, wherever they occur.

- Insofar as data permit, the new report examines opportunity and achievement among Washington students at all types of postsecondary institutions – public and private, degree-granting and not.

“Minority” and “socially disadvantaged” are not synonyms. Some students of color fare quite well in preparing for, participating in, and completing postsecondary education. Many white students fare poorly in some or all of these areas. Federal programs that aim to promote readiness and participation in higher education, such as TRIO and GEAR-UP, reflect this fact.

- *Opportunity and Achievement* examines preparation, participation, and achievement among all students.

The primary window of opportunity for policy recommendations is the biennial budget, adopted in odd-numbered years.

- *Opportunity and Achievement* will be produced every other year, and linked to the biennial budget cycle.

The purpose of this report is to inform thinking about the conditions that lead to opportunity and achievement, to focus attention on important accomplishments and problems, and to direct research and policy proposals in productive directions. This initial review of opportunity and achievement in Washington does not present either research-based conclusions or policy recommendations; rather, it is a prelude to research and policy formulation.

All of the data presented in the report, unless otherwise indicated, are based upon the state of Washington.

**Postsecondary Opportunity and Achievement in Washington
GOALS AND INDICATORS**

Goal One: Readiness	Indicators of Readiness	Measurement by Race/Ethnicity	Data Source
All who complete secondary schooling should be well-prepared to begin – and succeed in – postsecondary education or training	4 th , 7 th , and 10 th grade WASL scores	% with passing WASL scores in reading and math	OSPI
	student progress	a) annual dropout % b) on-time graduation	OSPI Graduate/Dropout Analysis
	advance placement testing/performance	a) ratio 11+12 th grade AP candidates/hs juniors/seniors b) % exams scored 3 or >	AP Candidates/Scores: College Board HS Juniors/Seniors: OSPI
	college entry test-taking	ratio SAT+ACT test-takers/seniors	Seniors: OSPI Test-Takers: College Board, ACT
	collegiate remedial coursework	% of year WA public HS grads enrolled following year in remedial English, math, English+math (2 & 4 year)	Graduate Follow-Up Study
Goal Two: Participation	Indicators of Participation	Measurement by Race/Ethnicity	Data Source
All who complete secondary schooling should continue education and training fitted to their preparation, aspirations, and needs	secondary continuation rates	% of WA public HS grads who begin postsecondary education/training in following year	Graduate Follow-Up Study
	participation rates in public institutions	# undergraduate students seeking degree or certificate, CTCs and PBIs/population 17+	Enrollments: IPEDS, SBCTC Population: Dept. of Health
Goal Three: Achievement	Indicators of Achievement	Measurement by Race/Ethnicity	Data Source
All students who begin postsecondary education and training should achieve their educational goals – whether basic skills, a certificate or degree	persistence	a) retention: % first-time freshmen and CTC transfers enrolled following fall b) substantial progress: # of degree-seeking students enrollment 4 or > quarters/# starting 2 years earlier with degree completion goal	Graduate Follow-Up Study SBCTC
	completion	a) % fall 2000 first-time freshmen completed by summer 2006 b) % fall 2000 first-time, full-time students completed by summer 2003	Public Baccalaureate Institutions SBCTC
	transfer	a) % initial intention to transfer within 2 years b) % 30+ credits and transfer intent at exit who transfer	SBCTC SBCTC
	precollege/basic skills gains	% of ABE/ESL students making skill gains	SBCTC
	degrees and certificates conferred	# of degrees and certificates	IPEDS, WTECB

GOAL ONE: READINESS FOR POSTSECONDARY EDUCATION

All those who complete secondary schooling should be prepared to begin – and succeed in – postsecondary education or training.

READINESS INDICATORS

- I. WASL Scores
- II. Student Progress: High School Completion
- III. University Entry Test-Taking
- IV. Advanced Preparation: College Work in High School
- V. Collegiate Remedial Coursework

I. WASL Scores

How can one evaluate whether Washington’s high school graduates are ready for postsecondary education? Like many states, Washington does not administer an exit examination to all students seeking their diploma; therefore, we have no comprehensive assessment of graduates’ readiness for further learning. Instead, we must rely upon statewide assessments administered prior to graduation.

Two statewide assessments are administered to all secondary students before graduation: the Iowa Tests (ITBS and ITED) and the Washington Assessment of Student Learning (WASL). Administered to nearly all public school students¹, the WASL is a test designed to measure the mastery of the essential academic learning requirements for students in the 4th, 7th, and 10th grades.

The WASL was designed to measure students’ mastery of the state’s essential academic learning requirements, not college readiness. Before relying upon the WASL as a measure of college readiness, the state’s education research community will have to learn about the link between WASL performance and collegiate outcomes – enrollment, persistence, completion, and grades. Moreover, the majority of Washington’s postsecondary students begin their studies in community and technical colleges, which require neither a high school diploma nor the completion of a prescribed set of courses.²

¹ In 1999-2000, 1.4% of 10th grade students were exempted from the WASL, and 7-12 percent did not take one of its four sections. The proportion of 4th and 7th grade students not taking the WASL was substantially smaller.

² Students may be admitted if they: (1) hold a high school diploma; (2) are 18 years of age and hold a general education development (GED) certificate; or (3) are at least 18 years of age and judged to be at a “suitable level of educational development” by the college.

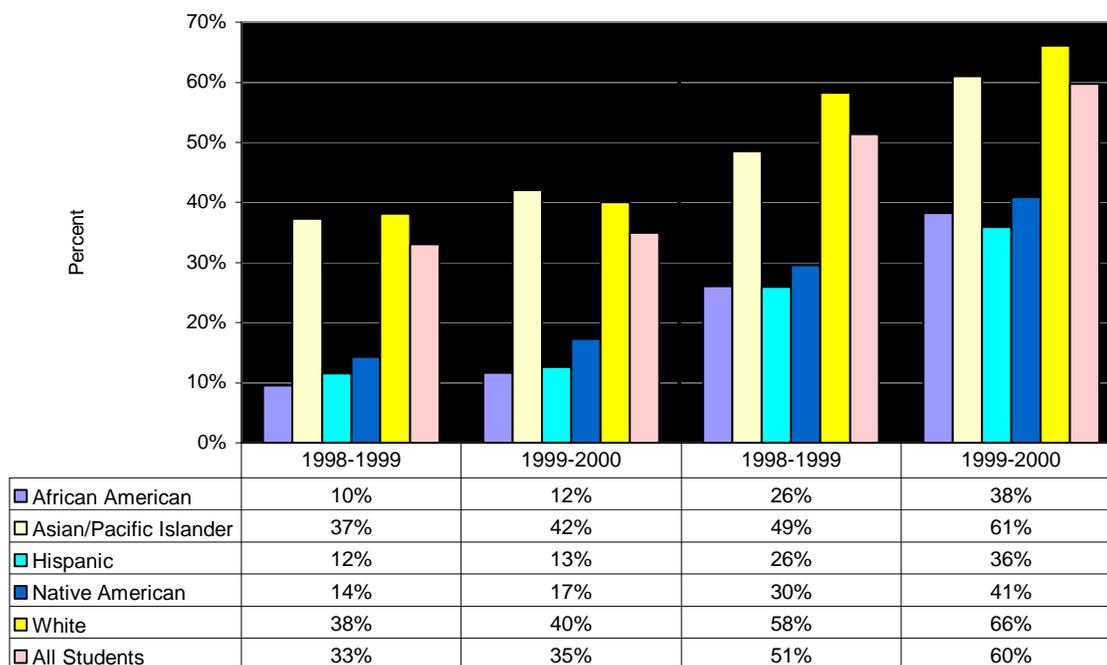
The WASL is used as an indicator of postsecondary readiness; it would appear that many 10th grade students are not on a course that will permit them to successfully begin postsecondary work.³

In 1999-2000, about 40 percent of white and Asian 10th grade students passed the examination's mathematics assessment. More than 60 percent passed the reading assessment. On average, though, only about 40 percent of Native American, African-American, and Hispanic students passed the examination's reading assessment, while fewer than 20 percent passed the mathematics assessment.

Two important qualifications should be kept in mind when reviewing these scores. First, WASL performance is not static. Changes in teaching practices and student capabilities have produced changing scores. The graduating class of 2002, tested in 1999-2000, did significantly better on the examination's reading assessment than did the class of 2001. Second, the WASL test, taken in the tenth grade, may be retaken in the student's junior and senior years of high school, permitting opportunities for improved performance.

Chart 1

10th Grade WASL: Percent Meeting Standards in Mathematics and Reading, by Race/Ethnicity



Source: Office of the Superintendent of Public Instruction

³ Students also take the WASL examination in grades four and seven. A careful examination of WASL results for 4th and 7th grade students is presented in "Analysis of Student Outcomes by Race/Ethnicity and Socioeconomic Status" (presented on April 2, 2001, to the Academic Achievement and Accountability Commission by Pete Bylsma of OSPI and John Bowden of AAAC). Particularly valuable is the disaggregation of WASL results into four levels of achievement, rather than two (pass/fail). In the fall of 2001, OSPI will release comparable data for 10th grade students.

II. Student Progress: High School Completion

Throughout the nation, calculating high school dropout rates is especially difficult and is hampered by serious problems of measurement error. Among the 45 states that report dropout data to the National Center for Education Statistics (NCES), the average high school dropout rate in 1995 was estimated to be 23 percent.⁴ Washington's high school dropout rate, depending on how one estimates it, is probably slightly below the national average.

Three common methods for estimating high school dropout and completion are available.

- **State Population Survey.** One can use a population survey to measure the proportion of a young adult age group – all 25-29-year-olds – who completed high school. According to the 1997 Washington State Population Survey (SPS), approximately 91 percent of 25-29 year-olds had completed high school. The state's population of 25-29 year-olds is significantly different from its population of high school students, due to the in- and out-migration of young adults aged 18-29. The SPS provides a better measure of schooling among the state's young adult population than it does high school completion among our state's secondary students.
- **Annual Dropout Rate.** The Office of the Superintendent of Public Instruction (OSPI) publishes a Public High School Dropout Report. The OSPI calculates an annual dropout rate for high school students based upon the P-210 data collection. In this data collection, school districts report on all enrolled public high school students, including dropouts, transfers, graduates, and students of unknown status (for whom no information is available). The annual dropout rate is calculated by dividing the number of students reported known to have dropped out during the school year divided by the total number of students enrolled. By this calculation, the annual dropout rate increases from four percent in 9th grade to seven percent in 12th grade. The annual dropout rate also varies by race, ranging from four percent (for Asian American and white students) to nine percent (for Native American and Hispanic students). The annual unknown status for grades 9-12 is approximately six percent.

The annual dropout rate significantly underestimates the cumulative number of students actually leaving high school. The actual risk of a student dropping out during their four years of high school cannot be measured with an annual dropout rate. Rather, one must follow a cohort of entering students, i.e. a graduating class, from entry through exit.

- **Cumulative Dropout Rate.** "*Graduation and Dropout Analysis: A Report on the High Schools of Washington State*" uses the enrollment status report submitted for each graduating class to arrive at estimated on-time graduation rates and dropout rates for the state's public high school students.⁵

⁴ "A Recommended Approach to Providing High School Dropout and Completion Rates at the State Level," NCES Technical Report, February 2000.

⁵ The "*Graduation and Dropout Analysis*" is an analysis prepared by Litzenberger Consulting using data from field 17 of the P210 enrollment report.

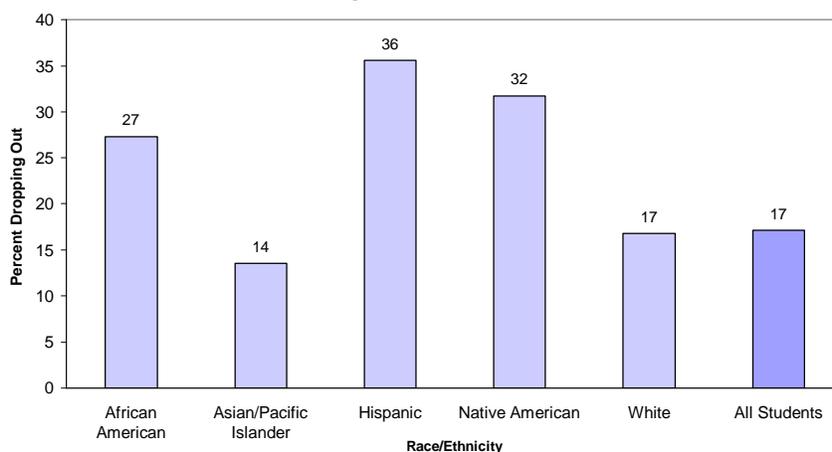
The OSPI calculation of a “Public High School Dropout Rate” is based upon the decision that “students who leave the district are considered unknown” unless (a) they indicate that they are dropping out, (b) their parents verify that they are in a home school program, or (c) another educational program requests their student records (i.e., indicating continued enrollment).⁶ The “*Graduation and Dropout Analysis*” makes the opposite decision counting students who leave a district without filing records as students who are no longer enrolled in secondary education. This calculation of the cumulative dropout rate is vulnerable to over-reporting of the actual dropout rate, since some students who leave high school continue their education without notifying their school districts.

The “*Graduation and Dropout Analysis*” Concludes that:

- 71 percent of the class of 1999 graduated on time (in June of 1999).
- Another 9 percent of students did not graduate on time and continue to attend a public high school.⁷
- 1.3 percent of students in the class of 1999 chose an alternate graduation process (e.g., GED).
- About nine percent of the high school graduating class of 1999 dropped out at some point in their four years of high school.
- Another eight percent of students were “unknown.” They left school without indicating whether they were transferring or choosing an alternate route to graduation. These students most likely dropped out of school.
- In total, 17.1 percent of the class of 1999 were probably dropouts.
- The dropout rate varies significantly by race and ethnicity.

Chart 2

**Estimated Dropout Rate:
Public High School Class of 1999**



Source: “*Graduation and Dropout Analysis*”

⁶ Bulletin No. 42-00 DA, p. 5, July 2000.

⁷ Research indicates that the majority of these students will not complete the comprehensive high school program and will move to an adult diploma or GED program.

On-time high school completion is lower than the rate of diploma-holding among all young adults (e.g. 20-22 year olds), since some students will later complete high school as young adults (e.g. by completing their GED). However, this measurement of high school completion is broadly consistent with national data and with independent efforts to analyze student progress undertaken by the Washington State Public Policy Institute.⁸ The Superintendent of Public Instruction is now developing a unique student identifier for the matching of student records, making it possible for a cohort-based analysis of student dropouts. When this new dropout estimate becomes available, the HECB will incorporate it into its reporting.

III. University Entry Test-Taking

Gaining admission to a public baccalaureate university in Washington requires that students take a college entry examination, either the SAT or the ACT. Taking the SAT or ACT examination provides us with evidence about students’ intentions to undertake baccalaureate studies. Table 1 compares the proportion of ACT and SAT examinations taken by students from each of five racial/ethnic groups to the proportion of high school seniors of each race/ethnicity.⁹ The ratio of examinations taken to high school seniors provides us with a rough measure of baccalaureate-going intentions among each student population.

Table 1

Preparing for University Entry

	African-American	Asian/Pacific Islander	Native American		
2000 ACT Test Takers	4%	8%	1%	4%	8%
2000 SAT Test Takers	3%	11%	1%	3%	78%
2000 High School Seniors	4%	8%	2%	6%	79%
SAT Exams/Seniors	.70	1.34	.43	.48	.99

Sources: College Board (SAT), ACT (ACT), OSPI (Seniors)

As these ratios reveal, Asian-American students are more likely to prepare for baccalaureate entry by taking the gateway SAT examination than any other population. They comprised 8 percent of high school seniors in 1999-2000 and 11 percent of SAT test-takers. White students are proportionally represented among those preparing for entry to a university. African-American seniors are significantly less likely to take the SAT examination than either whites or Asian-Americans, while Hispanic and Native American seniors are least likely.¹⁰

⁸ See “*Educational Opportunities in Washington’s High Schools Under State Education Reform*,” Volume I, pp. 25-30.

⁹ High school juniors (or graduates) may choose to take the SAT examination, and some individuals take the examination more than one time. Therefore, there may be more test-takers than high schools seniors. ETS, which administers the SAT, could provide an unduplicated count of seniors taking the examination, which could be matched against P-210 enrollment reports from OSPI to provide a precise picture of test-taking.

¹⁰ OSPI data on the race of high school seniors does not permit the response “other,” while the College Board’s SAT examination does. Three percent of SAT-takers report “other” for race/ethnicity.

IV. Advanced Preparation: College Work in High School

Many students choose to participate in college-level learning while in high school, such as Running Start, Advanced Placement, International Baccalaureate, and College in the High School. In 1998-99, 18 percent of all 11th and 12th grade students participated in college-level learning.¹¹ Taken together these provide a rough measure of how many students, and which students, are undertaking postsecondary work while completing their secondary education.

Who among Washington’s high school students participates in college-level learning? Student-level data on International Baccalaureate and College in the High School is unavailable. However, data are available for the larger of these two programs, AP and Running Start. Among Running Start participants who enrolled as first-time freshmen at a public college or university in fall 1999, a consistently small share were non-Asian minority students. Thirteen percent of the state’s high school seniors in 1998-1999 were African-American, Native American, or Hispanic students. Of the fall 1999 freshmen who enrolled in Washington’s public colleges and universities and brought Running Start credits with them, 6.5 percent were African-American, Native American, or Hispanic students.

Table 2

Former Running Start Students Enrolled in Public Universities and Colleges in Their First Year After High School, Fall 1999

	Number of Running Start Students, Fall 1999	% African-American, Native American, and Hispanic	% Asian/Pacific Islander	% White
CWU	90	n/a	n/a	n/a
EWU	85	0	0	100%
TESC	49	n/a	n/a	n/a
UW	709	6%	32%	62%
WSU	220	4%	10%	86%
WWU	306	6%*	7%*	87%*
CTC	2696	7%	9%	84%

*Data from fall 1998

n/a: data not available

Source: WSPPI, Volume 1, Educational Opportunity, pp. F3-F21

Advanced Placement (AP) examinations are similarly weighted towards white and Asian-American students, while the state’s African-American, Native American, and Hispanic high school seniors comprise a smaller share of all AP test-takers than they do high school seniors.

¹¹ “Educational Opportunities in Washington’s High Schools Under State Education Reform,” Vol. 1, p. 32.

Table 3**AP Examinations, May 2000 Washington High School Seniors**

	Percent of 1999-2000 High School Seniors	Percent of AP Test-takers
African-American	4	2
Asian/Pacific Islander	8	16
Hispanic	6	3
Native American	2	1
White	79	80

By either measure – Running Start participation or AP test-taking – Native American, Hispanic, and African-American students comprise about five to seven percent of the state’s high school students who are participating in postsecondary learning opportunities while completing their secondary education.

V. Collegiate Remedial Coursework

Of the 1998 public high school graduates who began postsecondary education at Washington’s two-year and four-year colleges and universities in 1999, just over one-third (36.3 percent) enrolled in remedial mathematics or English courses during their first year of studies.¹² About ten percent of all who continued directly to higher education needed remediation in both mathematics and English.¹³ Enrollments in English remediation classes are relatively low and enrollments in mathematics remediation are much higher, regardless of the institution that students attend or the race/ethnicity of students.

Institution of Enrollment

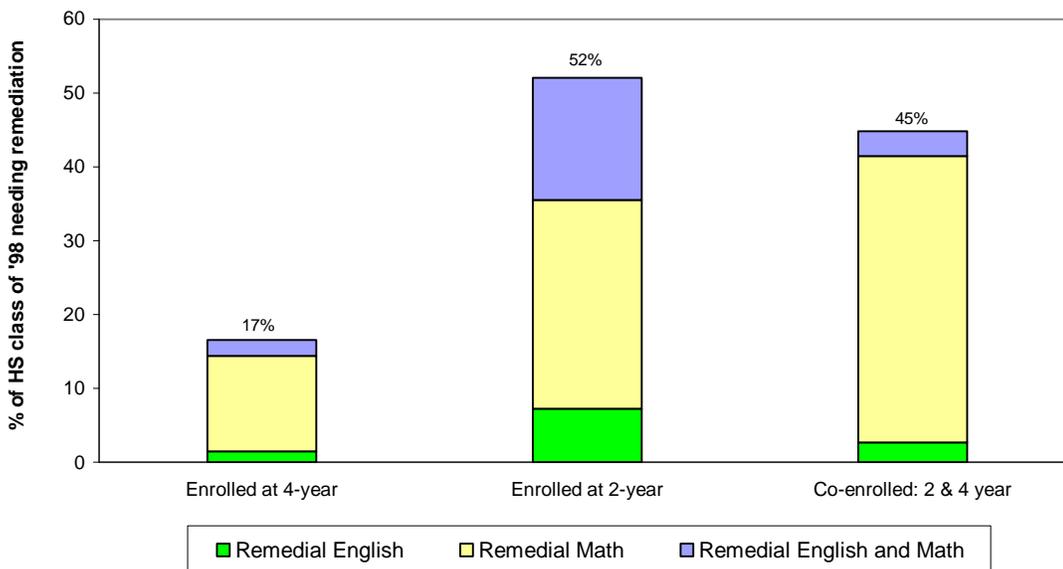
These rates vary significantly by institution. About one-half (52 percent) of two-year students enrolled in remedial courses, while 45 percent of co-enrolled students (those taking coursework at both two- and four-year institutions) enrolled in remedial courses. About 17 percent of baccalaureate students from the high school class of 1998 took remedial courses in their first year of baccalaureate studies.

¹² Analysis of remediation, and secondary continuation rates in part two, is based upon the Graduate Follow-Up Study. See Appendix One, Data Sources, for a discussion of the GFS.

¹³ Students who take one or two mathematics courses have a postsecondary graduation rate that is 80% that of students taking no remedial courses. Students taking any remedial reading courses have a graduation rate that is 61% that of students taking no remedial courses. “*The Condition of Education 2000*,” National Center for Education Statistics, US Department of Education.

Chart 3

**1999 Postsecondary Remediation:
Percent Provided by Type of Institution for
High School Class of 1998**



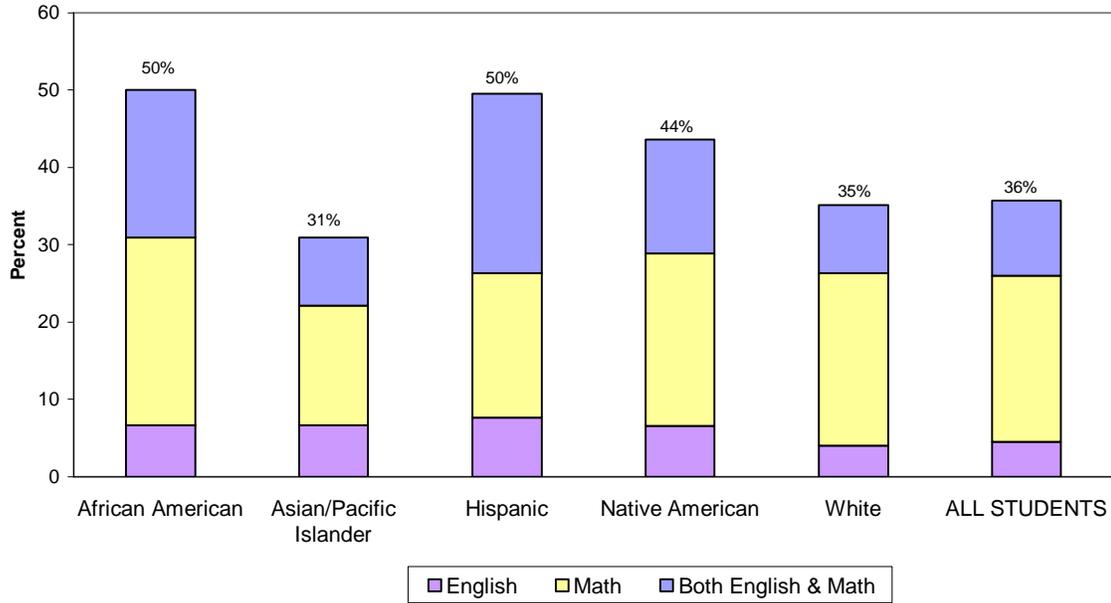
Source: "Graduate Follow-Up Study," Class of 1998

Race and Ethnicity

Rates of remediation also vary by race and ethnicity. While about 10 percent of all graduates from the public high school class of 1998 enrolled in both math and English remediation during their first year of higher education, these rates rise sharply among Native American, African-American, and Hispanic college students. Twenty percent of African-American students from the high school class of 1998, and 25 percent of Hispanic students enrolled in remedial courses in both subjects upon entering college or university.

Chart 4

**1999 Postsecondary Remediation:
Percent by Race/Ethnicity for High School Class of 1998**



Source: "Graduate Follow-Up Study," Class of 1998

University and college remediation is a conservative measure of readiness for postsecondary work. It measures the readiness of those 63 percent of students who received their high school diploma and enrolled in college in the year following their graduation, while omitting the 37 percent who did not continue directly to postsecondary education and training.

GOAL TWO: PARTICIPATION

Students who complete secondary schooling should continue education and training fitted to their preparation, aspirations, and needs.

PARTICIPATION INDICATORS

- I. Continuation Rate
- II. Population Participation Rate

I. Continuation Rate

Washington has one source of student-level information on post-high school outcomes of the state's high school graduates, the "*Graduate Follow-Up Study*" (GFS). The GFS is now conducted for the Superintendent of Public Instruction by the Social and Economic Services Research Center at the Washington State University.

For the class of 1998, some student data was available from 229 of the 244 high school districts in Washington. The GFS uses the voluntarily reported student social security number from the P-210 data collection and electronically matches high school enrollment records against student record systems at colleges, universities, and the state Department of Employment Security. Joining these files permits analysts to produce a database with information about where high school graduates go after high school, and if students enrolled in colleges, how well they initially did once they went there.

The GFS database has three important limitations.

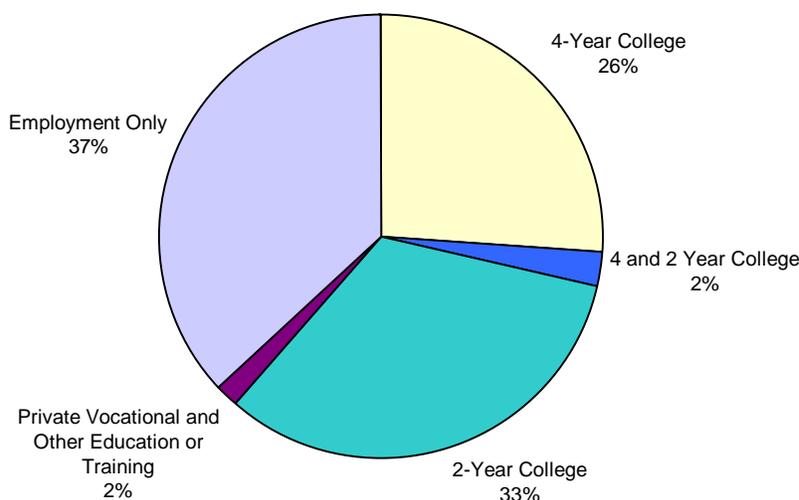
- It does not contain all high school graduates. It does not contain the records of 13 school districts, and within the remaining 229 districts it has social security numbers for 58 percent of graduating students. Of these students, 90 percent were located, leaving data for 52 percent of graduating students from 229 districts. Moreover, it does not contain data from all private four-year colleges.
- It follows high school graduates only briefly through their first year of postsecondary enrollment. It does not collect data for additional years, permitting us to assess the long-term achievement of high school graduates who continue directly to postsecondary education.
- It does not permit us to follow students who "stop out" after high school, but later return to postsecondary education or training. While nearly all first-time, full-time freshmen enrolled in baccalaureate universities come directly from high school, in some areas of postsecondary education, most importantly vocational education, students are most likely to enter after participation in the workforce. The median age of community and technical

college students enrolled for the purpose of job preparatory training is 29.5, and only 21 percent arrive directly from high school.¹⁴

According to the GFS, among the 1998 graduates of Washington’s public high schools, approximately 63 percent continued in the fall of 1999 with some type of postsecondary education or training, while 37 percent did not.¹⁵

Chart 5

Post High School Efforts: Class of 1998



Source: "Graduate Follow-Up Study," Class of 1998

Enrollment in the state’s community and technical colleges does not vary significantly by race or ethnicity among the high school class of 1998. However, rates of continuation to baccalaureate education vary widely among the high school class of 1998, ranging from 15.7 percent among Hispanic high school graduates to 35.4 percent among the state’s Asian-American high school graduates.

Due to sharp differences in baccalaureate attendance by race and ethnicity, total rates of postsecondary continuation among the class of 1998 are significantly different, ranging from just

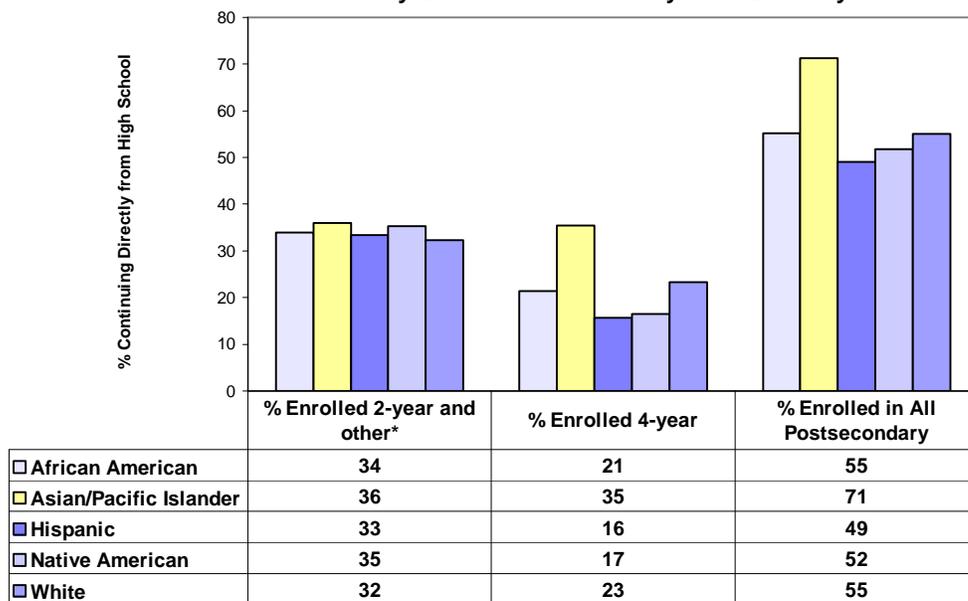
¹⁴ In contrast, CTC transfer-bound students are typically young: their median age is 21, and 65 percent of a fall entering cohort comes directly from high school. The median age of “upgrading workforce students” is 33.4. “*Washington Community and Technical Colleges, 2000 Enrollment and Staffing Report,*” p. 16-17. As Loretta Seppanen of the SBCTC points out, one would need to follow a high school graduating cohort for 10 years to pick up 50% of workforce students.

¹⁵ Earlier versions of the GFS estimated postsecondary non-continuation rates of 40% (1995), 36% (1996), and 34% (1997).

over 70 percent among Asian-American high school graduates to slightly less than 50 percent among Hispanic high school graduates.¹⁶

Chart 6

1998 High School Graduates Continuing Directly to Postsecondary Education: Percent by Race/Ethnicity



* Other includes private trade schools.
Source: "Graduate Follow-Up Study," Class of 1998

II. Population Participation Rate

A second way of measuring the level of participation in postsecondary education is to estimate a population participation rate. The participation rate is calculated by dividing the total undergraduate (headcount) enrollments reported by the state's public universities and colleges by the entire adult (17+) population of the state of Washington. The same calculation may be made for each racial or ethnic group, permitting us to compare rates of participation in postsecondary education.

Rates of participation in Washington's community and technical colleges range from three to six percent, with Hispanic, Asian/Pacific Islander, and African-American populations showing the highest rates of participation.

Rates of participation at the state's public baccalaureate institutions are lower, ranging from one to about three percent. The rate of public baccalaureate participation among the state's Asian/Pacific Islander population is significantly higher than that of any other group.

¹⁶ Earlier GFS studies show a 41 percent continuation rate for Hispanic students in the high school graduating class of 1997.

Using the population participation rate to measure participation has one advantage. It includes adult, nontraditional learners participating in postsecondary education as well as students entering directly from secondary education. Unfortunately, the population participation rate has a number of characteristics that limit its usefulness as an indicator of postsecondary participation.

- The population participation rate has included only public universities and colleges while omitting private four-year schools, private vocational schools, and other forms of postsecondary education and training. The continuation rate, in contrast, tracks the transition of students to all types of postsecondary institutions, including most private providers.
- The population participation rate is a highly aggregated measure. It compares all public enrollments to the entire adult population of Washington. It is insensitive to important changes in the behavior among some students, e.g. a decline in freshmen enrollments among Hispanic and African-American students following the adoption of Initiative 200.
- The population participation rate counts all enrollments in Washington’s public colleges and universities, including out-of-state students. It also excludes Washington residents who choose to study out-of-state. The continuation rate, in contrast, tracks the postsecondary outcomes of Washington public high school graduates.
- The population participation rate is insensitive to the dissimilar age distributions of racial and ethnic groups in the state. Calculating the baccalaureate participation rate using only the 18-39 year old age cohort rather than the entire adult population produces important differences in participation rates by race/ethnicity. For example, the gap between African-American and Hispanic participation and that of other groups widens.

Table 4

Baccalaureate Participation

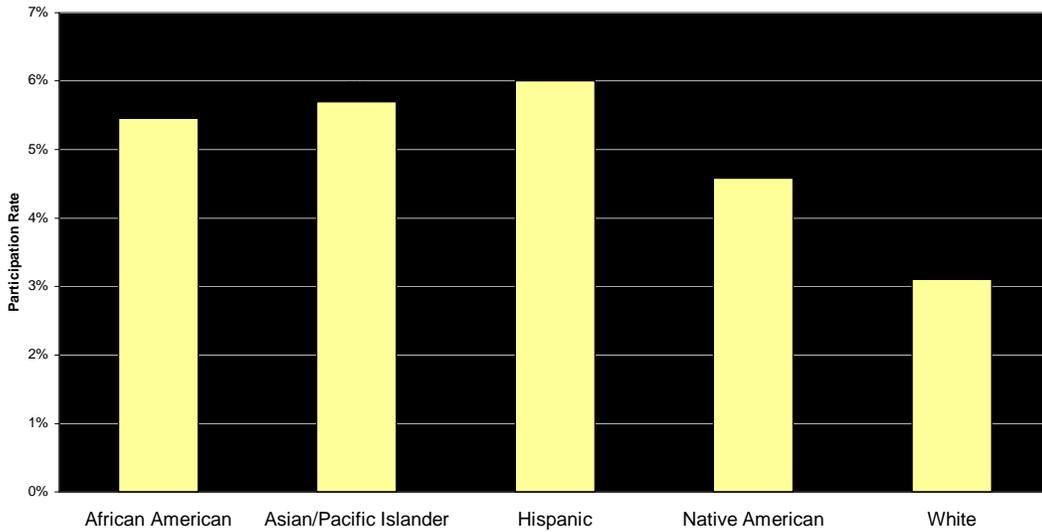
Baccalaureate Participation: The Impact of Different Age Distributions	Population Participation Rate, 18-39	Population Participation Rate, 18+
African-American	2.4%	1.4%
Asian/Pacific Islander	7.0%	3.3%
Hispanic	1.9%	1.1%
Native American	3.4%	1.8%
White	3.4%	1.4%

Data Sources: enrollments (IPEDS); population (WA Department of Health)

Some of these measurement problems could be corrected if the state’s higher education providers chose to adopt new data collection and reporting practices. However, the most basic problem with the population-based approach is conceptual. It does not allow us to understand students’ careers as they move from secondary to postsecondary education and beyond.

Chart 7

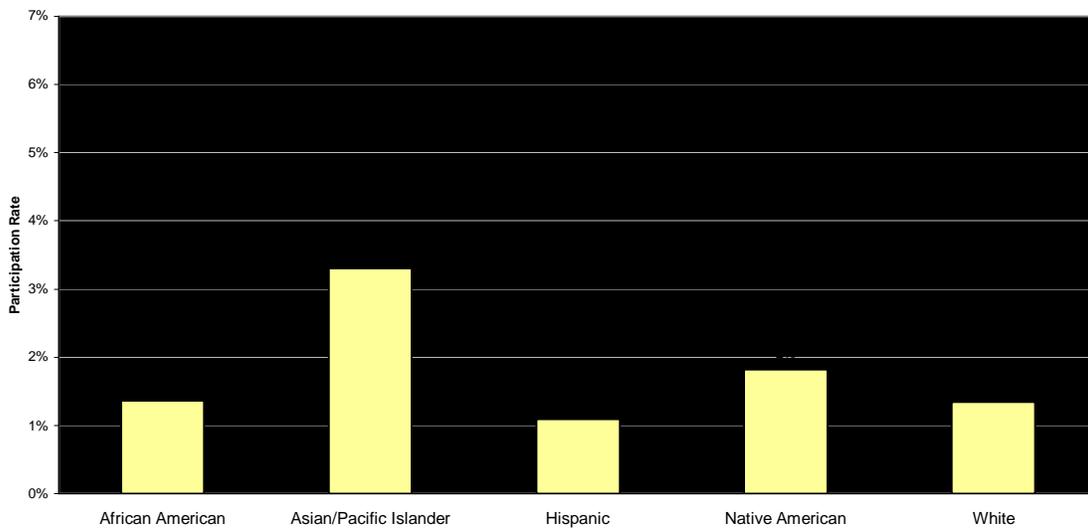
**Participation Rates by Race/Ethnicity, 2000-2001:
Enrollment Compared to Population,
Community/Technical Colleges**



Participation Rate: Percent of population age 17 & above, by race/ethnicity, enrolled in college.
Source: SBCTC, Department of Health

Chart 8

**Undergraduate Participation Rates, by Race/Ethnicity,
2000-2001, Enrollment Compared to Population,
Public 4-Year Institutions**



Participation Rate: Percent of population age 17 & above, by race/ethnicity, enrolled in college.
Source: IPEDS and Department of Health

GOAL THREE: ACHIEVEMENT

All students who begin postsecondary education and training should be able to achieve their educational goals, whether basic skills, a certificate, or degree.

ACHIEVEMENT INDICATORS

This report focuses on five measures of student achievement.

- I. Persistence
- II. Completion
- III. Transfer
- IV. Basic Skills Gains
- V. Degrees/Certificates Conferred

I. Persistence

The State Board for Community and Technical Colleges (SBCTC) uses persistence as a measure of student retention made by the subgroup of students who enroll for the purpose of obtaining an associate degree. SBCTC measures degree-seeking student progress by the number of quarters enrolled over a two-year period.

- Early leavers: Students with degree plans attending only the first quarter and not returning in two years time.
- Some progress: Students with degree plans attending two or three quarters over the two-year period.
- Substantial progress: Students with degree plans graduating or attending four or more quarters over the two-year period.¹⁷

Rates of substantial progress are significantly lower for Native American and African-American students than for other students. About one-quarter discontinue their studies after attending only their first quarter.

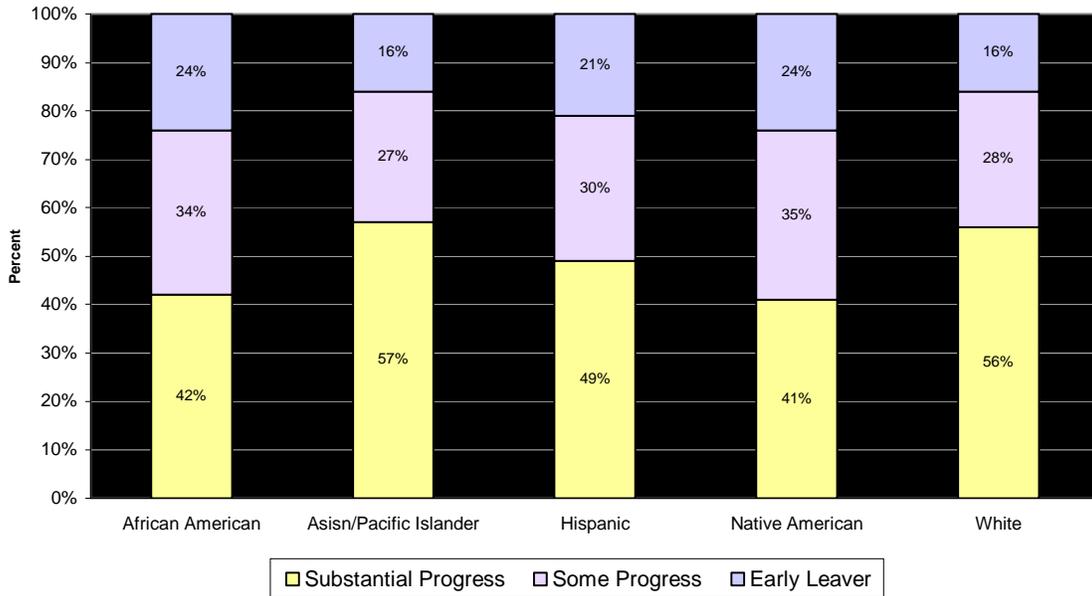
As the SBCTC notes, “Student progress patterns have remained unchanged over time. About 15 to 16 percent of full-time (degree-seeking) students are early leavers, and 56 to 57 percent graduate or make substantial progress towards their degree in two years.”¹⁸

¹⁷ “Access and Success For System Goals For People of Color in Washington Community and Technical Colleges: Sixth Progress Report,” September 2000, p. 6.

¹⁸ Idem.

Chart 9

**Community/Technical Colleges:
Status of 1998 Entering Cohort by Spring 2000**

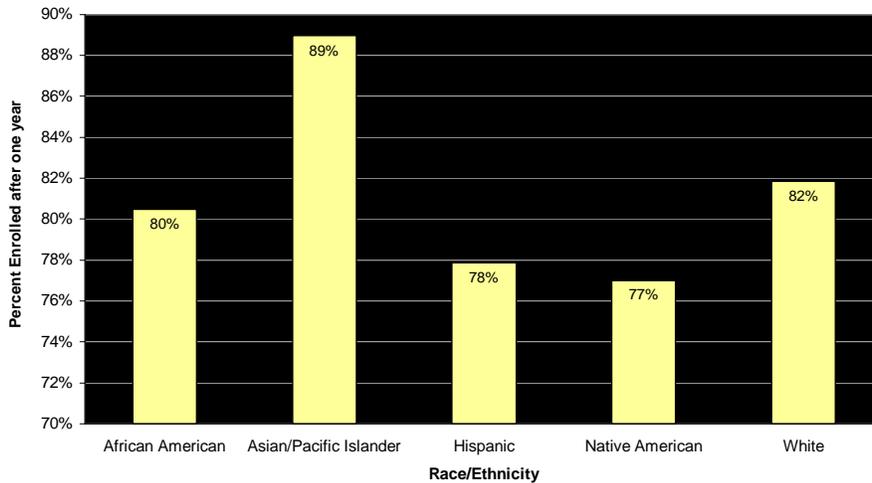


Source: SBCTC

Freshmen to sophomore persistence rates at Washington’s public baccalaureate institutions are calculated by measuring the proportion of first-time freshmen enrolling in the fall of one year who re-enroll at the same institution the next fall. Rates of retention are substantially similar across racial/ethnic groups, although distinctly high rates of retention occur among Asian/Pacific Islander students.

Chart 10

**Freshmen to Sophomore Retention, by Race/Ethnicity,
Fall 1999 to Fall 2000
Public Four-Year Institutions**



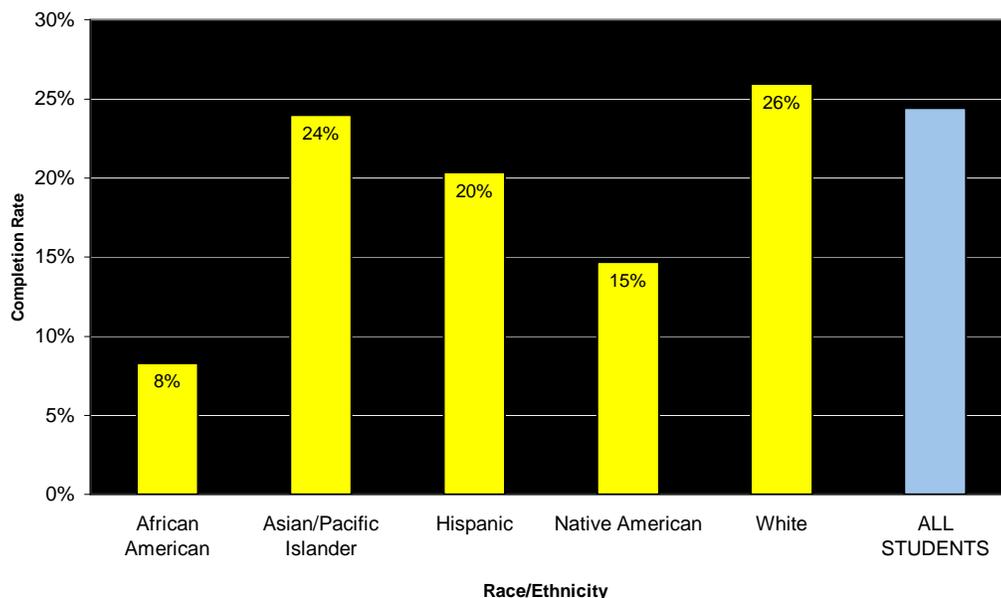
Source: Public 4-Year Institutions

II. Completion

The community college completion rate is calculated by dividing the number of full-time degree seeking CTC students who finished their degree within three years of beginning their studies.

Chart 11

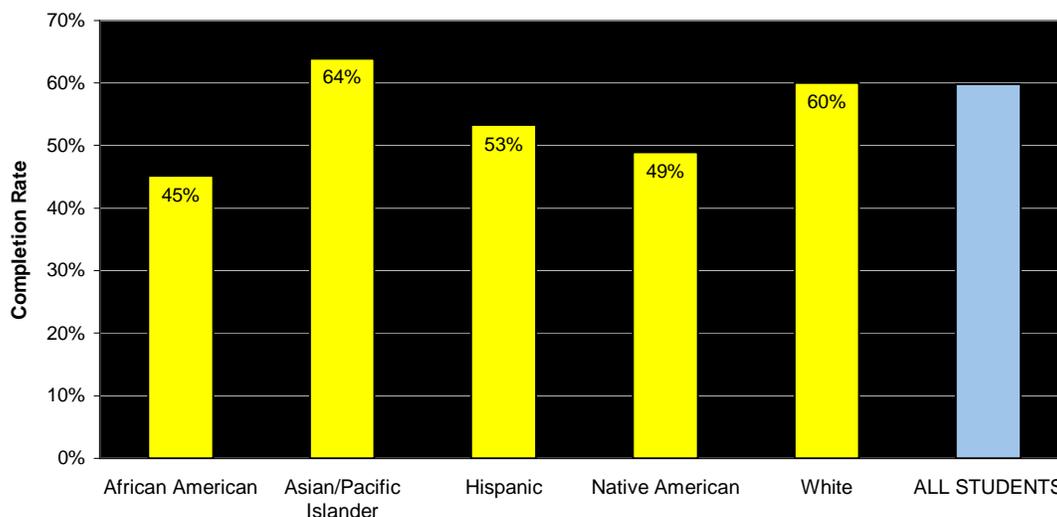
Three-Year Community College Completion Rates by Race/Ethnicity: For Students First Enrolled Fall 1997 Who Completed by 1999-2000



Source: SBCTC
See HECB 1999 Report, "Diversity and Participation...." for completion rates in prior years.

Completion rates vary still more widely by race and ethnicity than do substantial progress rates. Consistent with national patterns, about one-quarter of full-time degree-seeking students will complete their degrees within three years. Rates of completion are moderately lower among Hispanic students and sharply lower among Native American and African-American students, among whom only about one in ten achieved their degree goal within three years of beginning their studies.

Rates of completion at the public baccalaureate institutions are measured by calculating the percentage of first-time freshmen students who receive their baccalaureate degree within six years. Only students who complete their degrees at the university where they first matriculated are counted as completing students; those who transfer to another institution are counted as non-completing students.

Chart 12**Six-Year Completion Rates at Public 4-Year Institutions,
by Race/Ethnicity**

Data reflect proportion of entering freshmen in 1994 who completed a degree at the same institution by 1999-2000.

Source: IPEDS and Public 4-Year Institutions

III. Transfer

The proportion of students who transfer to four-year institutions depends upon the academic preparation and advising they have received at CTC institutions, students' own calculations about continued schooling and its alternatives, the admissions choices of baccalaureate institutions, and statewide transfer and articulation policies. For the purposes of this report, two measures of transfer are used.¹⁹

- Students Transferring to a Public Baccalaureate Institution Within Two Years.** This figure is calculated by dividing the number of first-time fall transfers from Washington community and technical colleges by the number of enrollees in the community and technical college sector, in the fall two years prior, who declared an intent to transfer.

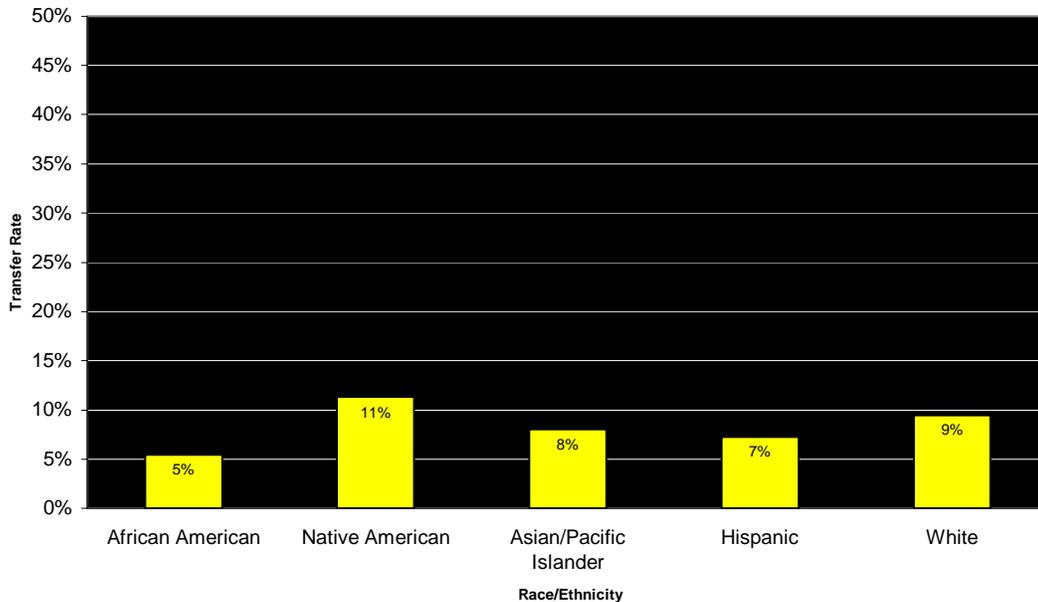
This is a highly restrictive definition of transfer, since it assumes that students will begin at a baccalaureate institution only two years after first enrolling in a CTC institution. Only a small proportion of students planning to transfer will matriculate at a public baccalaureate university after two years, on average about one in ten. African-American

¹⁹ For a discussion of the complexities of measuring transfer behavior, see *Transfer Outcomes in Washington Community Colleges*, SBCTC, January 1994 (revised August 10, 1994). The SBCTC uses "transfer ready" – the number of students completing 45+ credits with a 2.0 cumulative GPA – rather than transfer rates as an accountability measure. Our focus here is not accountability, but student progress and achievement across the entire system of postsecondary education.

students are consistently less likely to make this transition in two years than are other students.

Chart 13

Percent of Community College Students Transferring to Public 4-year institutions Within Two years: by Race/Ethnicity



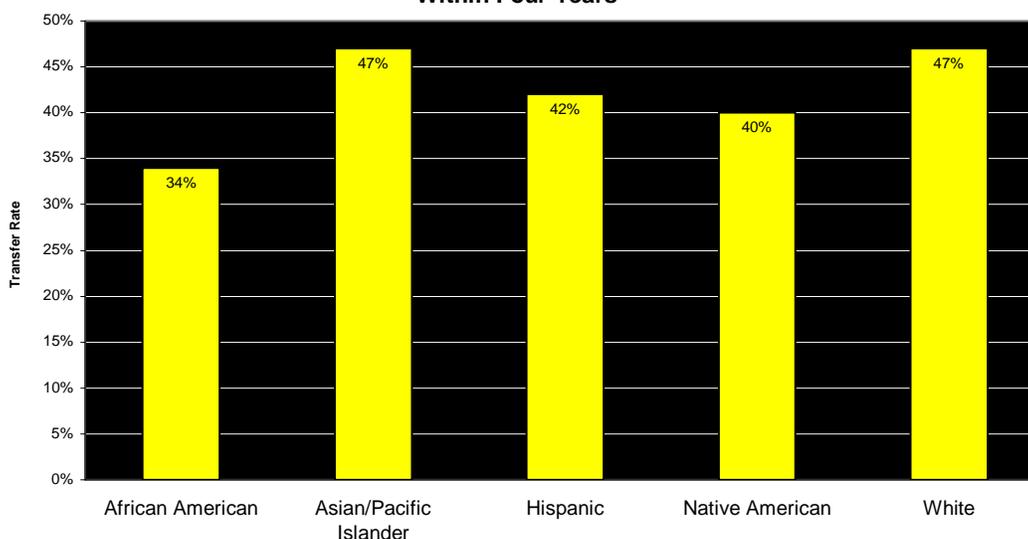
Note: Data reflect community college students who declared an intent to transfer.
 Source: SBCTC and Public 4-Year Institutions
 See HECB 1999 Report, "Diversity and Participation..." for transfer rates in prior years.

- **Students Transferring to All Baccalaureate Institutions Within Four Years.** This transfer measure, calculated by the SBCTC, indicates the proportion of students who transfer to a baccalaureate institution within four years, among the subset of students who complete 30 credits and indicate a transfer intent at the time of leaving a two-year college.²⁰

²⁰ *Access and Success*, p. 8.

Chart 14

**Percent of Community College Students Transferring to
Any 4-Year Institution (Public or Private)
Within Four Years**



Source: SBCTC

Data include students completing 30 credits who indicate an intent to transfer upon leaving the community college system.

Calculated using a longer period of time and a fairly exclusive set of students (those who have completed 30 credits and intend to transfer at exit), this measure yields a much higher transfer rate (47 percent) and lower levels of variation by race and ethnicity than the two year measure.²¹

Earlier SBCTC studies measured transfer rates using four years but a larger subset of students -- “all students new to college enrolled in college-level courses...who transfer to public four-year institutions within four years of entrance after earning a minimum of 18 quarterly credits.” This yielded a 24 percent transfer rate for all students, ranging from 13 percent for African-American students to 30 percent for Asian/Pacific Islander students.

IV. Basic Skills Gained

Many students enroll in community colleges to gain basic skills (e.g., literacy) rather than postsecondary skills, certificates, or degrees. To measure the progress of these students, the SBCTC calculates a “substantive skills gain rate,” reporting the proportion of Adult Basic Education and English as a Second Language students who make significant skills gains.²²

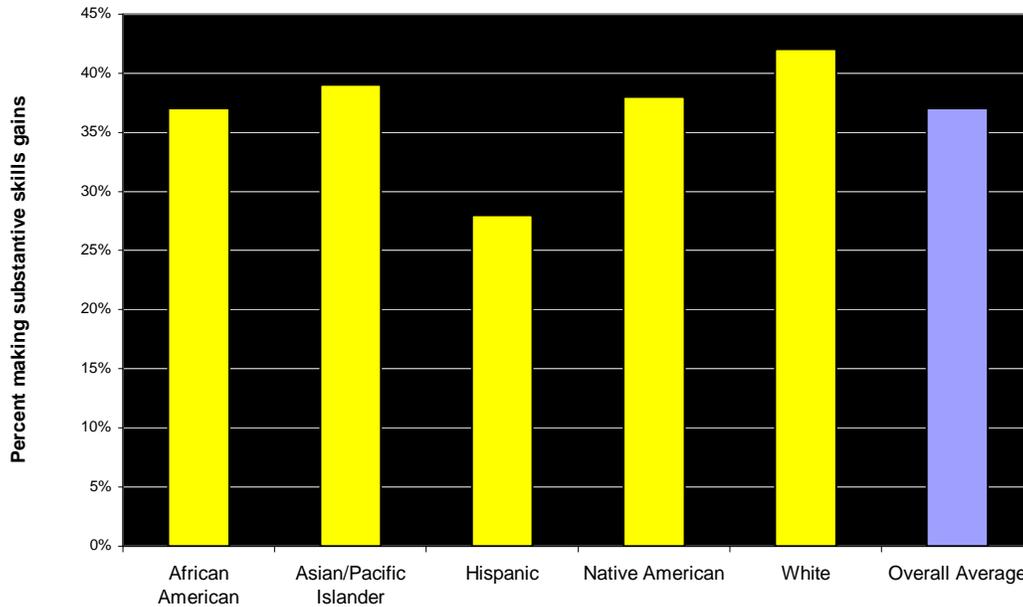
²¹ *Transfer Outcomes in Washington Community Colleges*, August 10, 1994, pp. 12-13.

²² Test scores measure substantive skill gains. Post-test skill gains of greater than one competency level are “significant.” Examples include “an ABE student, able to write simple sentences and provide basic information on forms at the start of classes, [who] is now able to write in paragraphs as part of short reports or informal memos.” Alternatively, “an ESL student, who at the start has the ability to recognize simple English words, is now able to read and understand English information on everyday topics to meet basic needs.” *Access and Success*, 2000, p. 5.

On average, 37 percent of participants in basic skills courses make “substantive skills gains.” White participants, at 42 percent, are most likely to make skills gains. Hispanic participants, at 28 percent, have the lowest rate of basic skills gains.

Chart 15

**Basic Skills: Percent Making Substantive Skills Gains
Community/Technical Colleges**



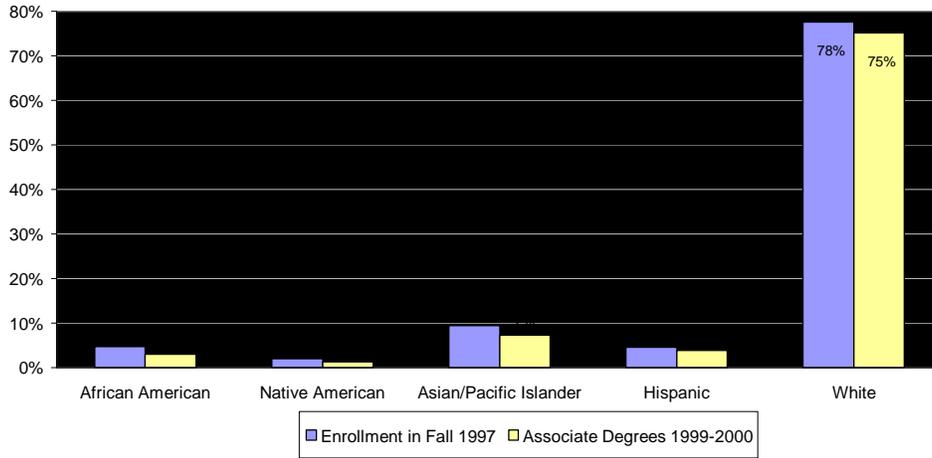
Source: SBCTC, "Access and Success"

V. Degrees/Certificates Conferred

Rates of persistence among Hispanic, African-American, and Native American are lower than those of other students. Therefore, these students obtain a share of associate degrees, vocational or academic, somewhat smaller than their proportion of enrollments in the public two-year system.

Chart 16

Percent Enrolled with Intent to Transfer, and Associate Degrees Awarded 3 Years Later: Community-Technical Colleges

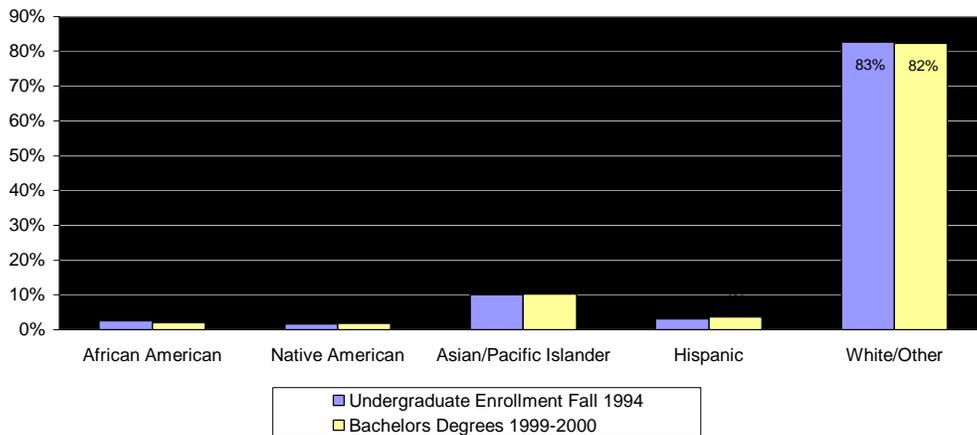


Sources: SBCTC (Fall Enrollment)
 IPEDS (Degrees)
 Note: Does not include data for other or unknown race, or international students

Taken together, Hispanic, African-American, and Native American students earned 8 percent of baccalaureate degrees at Washington’s public baccalaureate universities in 1999-2000. This proportion is roughly equal to their share of undergraduate enrollments in these institutions in the fall of 1994, when many 1999-2000 graduates would have begun their studies.

Chart 17

Percent Undergraduates Enrolled in Fall 1994, and Bachelors Degrees Awarded 6 Years Later: Public Four-Year Institutions



Sources: IPEDS
 Note: "White/Other" includes data for white, other or unknown race, and international students.

SUMMARY

PREPARATION, PARTICIPATION, AND ACHIEVEMENT

This initial review of opportunity and achievement in Washington does not contain research-based conclusions or policy recommendations. Rather, it is a starting point for this work. Its purpose is to focus attention on important accomplishments and problems, to sharpen thinking about the conditions that lead to opportunity and achievement, and to direct research and policy proposals in productive directions.

I. READINESS

Large numbers of young people in Washington appear to be unprepared to begin postsecondary education, either because they have not received their high school diploma, or because they have completed their diploma but not fully acquired the skills required to succeed in postsecondary education.

Noncompletion

About 83 percent of Washington's high school students complete high school, and 17 percent do not. The proportion of students who do not graduate is significantly higher than average for Hispanic, African-American, and Native American students, ranging from 27 to 35 percent.

Completed, But Ready?

The completion of a high school diploma is not a guarantee of readiness for postsecondary education. In 1998, 63 percent of Washington high school graduates continued directly to postsecondary education. About one-third (36 percent) undertook some postsecondary remedial coursework in their first year of higher education enrollment. Among Hispanic, African-American, and Native American high school graduates, roughly one-half who continued to postsecondary education in 1998-1999 enrolled in some remedial coursework.²³

II. PARTICIPATION

Continuation: From High School Graduation Directly to Postsecondary Education

More than 6 in 10 students who graduated from Washington's public schools in 1998 continued *directly* to some type of postsecondary education and training. Others from this graduating class will later join them after participating in the workforce or raising children.

²³ For national research on college preparedness among high school graduates, see *Access to Postsecondary Education for the 1992 High School Graduates*, NCES, 1997. Focusing on high school graduates, it estimates that 47 percent of African-American graduates, 53 percent of Hispanic graduates, and 68 of white graduates are "qualified for four-year college entry." Relying on rates of remedial enrollment in the first year of postsecondary schooling probably overestimates readiness for college, since some students who need remediation may choose not to enroll in remedial courses during their first year.

At first glance, rates of participation in postsecondary education appear to be not only high, but also broadly similar across most of the state's racial and ethnic communities. While rates of direct continuation to postsecondary education are very high among Asian/Pacific Islander high school graduates (71 percent), they range between 49 and 55 percent for all other groups.

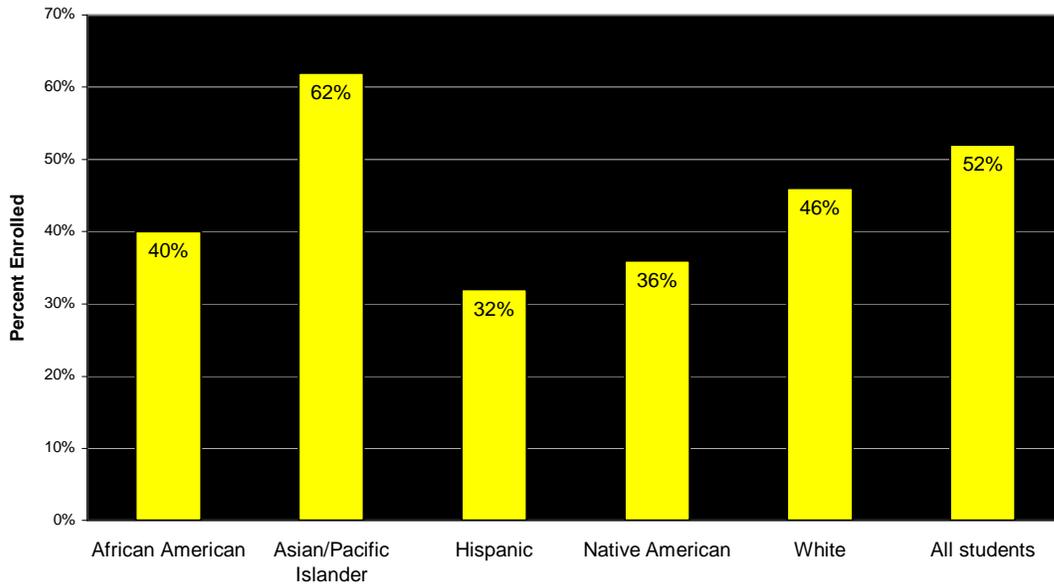
This evenness in participation is due entirely to the broad and even patterns of entry into Washington's two-year system. There is essentially no racial or ethnic variation in rates of continuation to the state's community and technical college system. African-American and Native American students, for example, are as likely to continue directly from high school graduation to a community or technical college as white high school graduates.

In contrast, rates of direct continuation from high school to baccalaureate institutions vary widely. Among the class of 1998, Hispanic and Native American graduates were about half as likely to continue directly to a university (16 percent) as Asian/Pacific Islander students (35 percent).²⁴ Hispanic, Native American, and African-American students are more likely than other students to take a two-stage path from high school to university through a two-year institution.

Continuation: High School Freshmen to College Freshmen

If one links the high school completion rate to the high school to postsecondary continuation rate, it is possible to estimate the proportion of high school freshmen that enroll five years later as beginning postsecondary students. Approximately 65 percent of Hispanic freshmen will finish high school, and 49 percent of Hispanic high school graduates will continue directly to postsecondary education. The product of these two rates (.65 multiplied by .49) is 32 percent. In short, about one in three Hispanic high school freshmen will both graduate from high school *and* continue directly to postsecondary education. This rate is slightly higher among Native American and African American students, at 36 and 40 percent, respectively. Among white students, this rate is 46 percent, due almost entirely to higher rates of high school completion. Asian/Pacific Islander students make the direct transition from grade 9 to postsecondary education at a rate far higher than all other groups, 62 percent.

²⁴ These patterns are the same whether one relies upon a population participation rate or a continuation rate.

Chart 18**Postsecondary Continuation Rate:
High School Freshmen Enrolled in College 5 years later**

Source: HECB calculation using "Graduation and Dropout Analysis" and Graduate Follow-Up data

III. ACHIEVEMENT

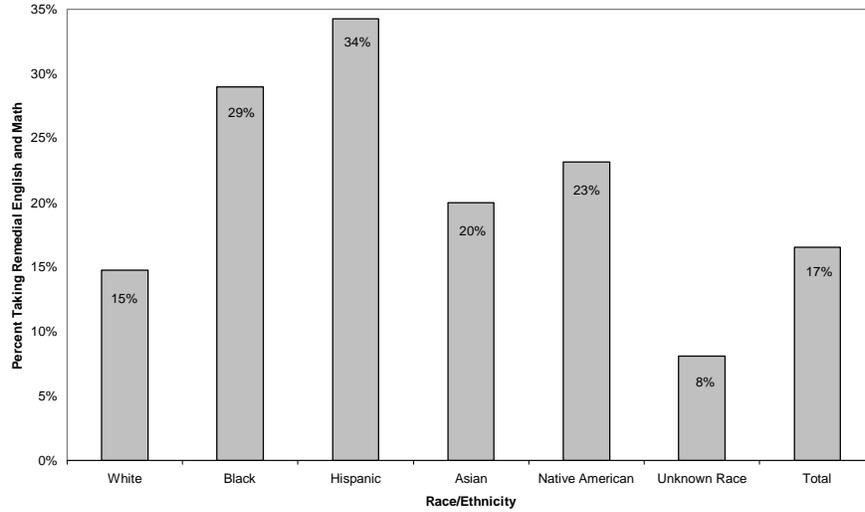
Throughout the nation, patterns of postsecondary entry and achievement are inversely related. Where entry is broad and open, rates of achievement are relatively low; where entry is somewhat selective, fewer students from disadvantaged racial and ethnic minorities gain entry, but rates of achievement are higher. Such is the pattern in Washington.

The Link Between Readiness and Achievement

As the preceding section showed, rates of entry into Washington's community and technical college (CTC) system are nearly uniform across racial and ethnic groups. Rates of achievement – of persistence, degree completion, and transfer – are not. For example, the three-year completion rate for students who plan to earn an AA or AS degree vary widely among racial and ethnic groups, ranging from 24 to 26 percent (for Asian/PI and white students, respectively) to 8 and 15 percent (for African-American and Native American students).

Chart 19

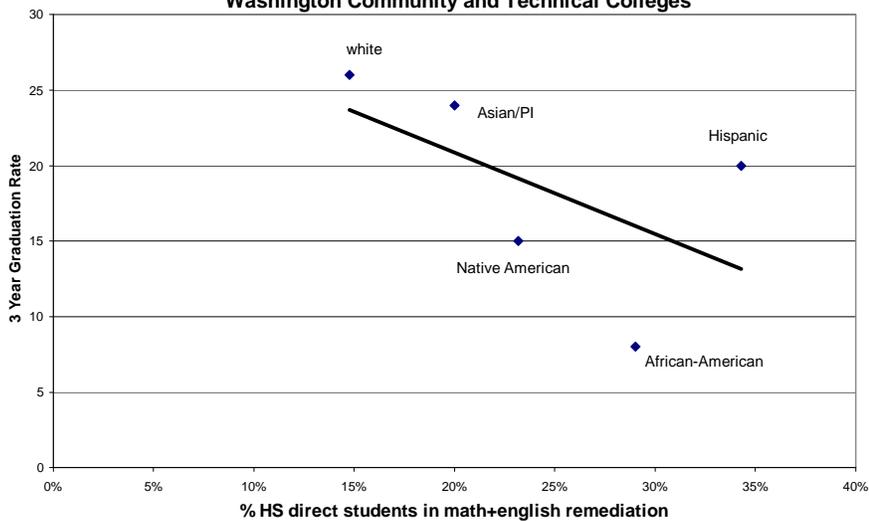
High School Class of 1998 Continuing Directly to CTC System: Percent Taking Both Remedial English and Math



An open door policy permits students of all ages, backgrounds, and levels of academic preparation to enter CTC institutions. Among the students who enter CTC institutions directly from high school, many will have weaknesses in preparation to remedy. Rates of remediation in mathematics and English are especially high among African-American and Hispanic students.

Chart 20

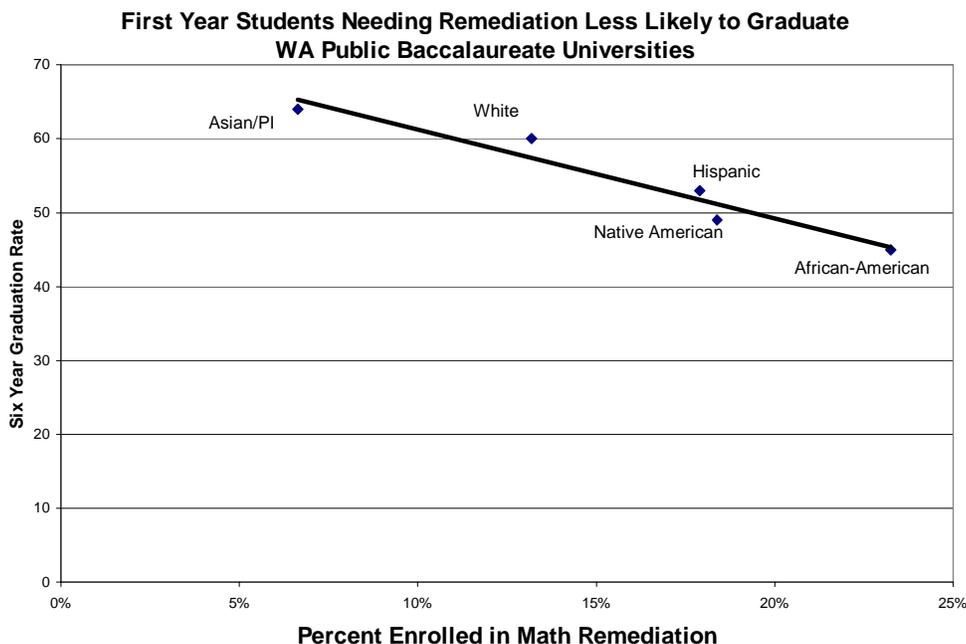
First-Year Students Needing Remediation Less Likely to Graduate Washington Community and Technical Colleges



The forces that shape student progress and achievement are complex. Working full-time, and having unmet financial need all diminish students' prospects for degree completion.²⁵ Of all the factors that limit students' prospects for achievement, few are more important than academic preparation. Much but not all of the differences one sees in achievement lie in the different levels of academic preparation that our state's students bring to the CTC system.²⁶

The pattern of readiness among high school graduates continuing directly to four-year institutions is significantly different from that of students continuing to two-year institutions. Only two percent high school students continuing directly to baccalaureate institutions require remediation in both mathematics and English. While 34 percent of Hispanic graduates continuing directly to a CTC institution require math and English remediation, only four percent continuing directly from high school to a four-year institution do. Predictably, rates of completion among students enrolling in the state's public baccalaureate institutions are significantly higher than they are among students enrolling in two-year institutions.²⁷ Moreover, completion rates vary more modestly across racial and ethnic groups enrolled in public baccalaureate institutions than they do in the CTC system.

Chart 21



²⁵ National Postsecondary Aid Study, 1993.

²⁶ One-third of the variation in completion is attributable to differences in levels of remediation. To reach firm conclusions, one would need student-level data rather than aggregate data, and a fully specified statistical model that incorporated financial need, family circumstances, student plans, and other factors.

²⁷ Using the same standard to measure completion: 150% of time to degree (or three and six years to degree).

NEXT STEPS

Washington is faced with three principal challenges: 1) broadening the pipeline of students who are prepared to enter – and succeed – in higher education; 2) ensuring adequate access to public universities; and 3) turning access into achievement in open enrollment institutions.

To respond to these challenges, the HECB will meet with universities, colleges, and other governing agencies to review this diagnosis of opportunity and achievement, and plan a collaborative research agenda. The first round of research will be completed in 2002, and lay the foundation for policy proposals offered in the 2003 legislative session.

Below are outlined some of the initial questions that might be addressed, and suggestions regarding potential partnerships for addressing them. These initial questions and potential partnerships will be revised and expanded as the HECB proceeds with this research.

I. Broadening the pipeline of students who are prepared to enter – and succeed – in higher education

A. Comprehensive School Reform

Are students who succeed under standards-based education reform – e.g., who meet WASL standards – more likely to enroll and succeed in postsecondary education and training than those who do not?

Potential Partners

The Office of the Superintendent of Public Instruction, public colleges and universities, private colleges and universities, the Workforce Training and Education Coordinating Board, and the Washington State Public Policy Institute.

Potential Policy Proposal

Link university admissions policy to the Washington Assessment of Student Learning.

B. Targeted Early Intervention

What proportion of students who are ill-prepared for postsecondary education are being served by targeted early intervention programs such as GEAR-UP? Are targeted interventions boosting students' educational aspirations, academic readiness for postsecondary education, or participation and achievement in postsecondary education?

Potential Partners

State GEAR-UP administrators, public and private colleges and universities, and high schools.

Potential Policy Proposal

Seek state support for some early intervention initiatives; modify existing early interventions in light of research findings.

II. Ensuring adequate access to public universities

Adequate Access

A. Are minimum entry qualifications for public universities predictive of student success? How successful are students admitted in exception to these policies?

B. Is there a pool of students who are qualified for entry to public universities who are choosing not to seek entry? Is there a pool of students who are nearly qualified for university entry, and might become qualified with additional support and information?

Potential Partners

Public universities, high schools.

Potential Policy Proposals

Revisions to minimum admissions policy; initiatives targeted at “nearly qualified” students.

III. Turning Access into Achievement in Open Enrollment Institutions

What factors explain successful student outcomes? Why are completion rates for some students substantially lower than for others?

Potential Partners

State Board for Community and Technical Colleges and individual community and technical colleges.

Potential Policy Proposals

Revisions to student assessment and remediation, financial aid, advising, and support services.