

# **Washington Higher Education:** Students and Faculty

System Design Plan Meeting  
June 15, 2009

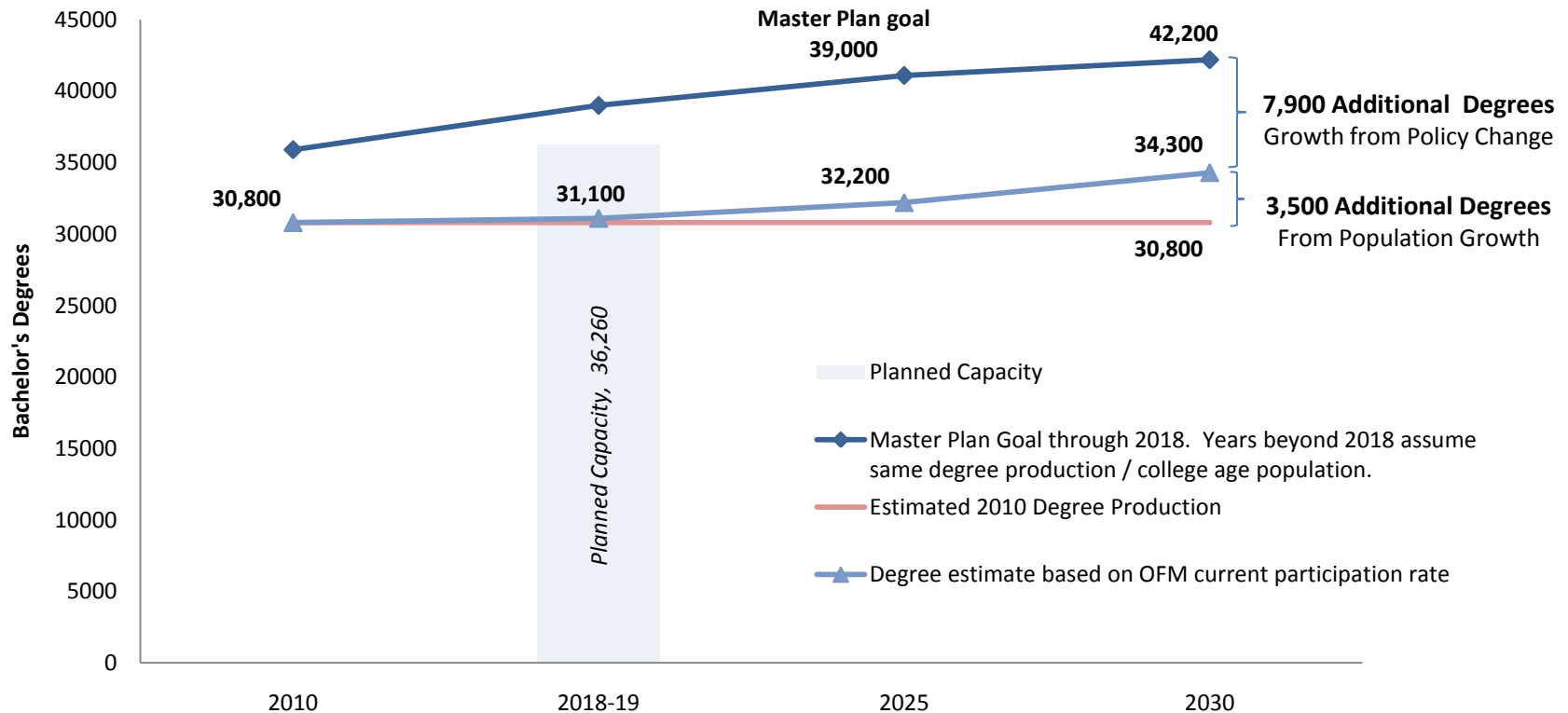
## Review from Last Meeting

1. What participation in higher education do we need to reach *Master Plan* degree goals projected to 2030?
2. What is the gap?

# What participation do we need to meet *Master Plan* degree goals?

If we just depend on population growth, we won't reach *MP* goals projected to 2030. Between 2010 and 2030, an additional 11,400 degrees would be required to meet *MP* goals.

## Bachelor's Degree Goals and Expected Growth 2010-2030 Includes Public and Private Institutions



Sources:

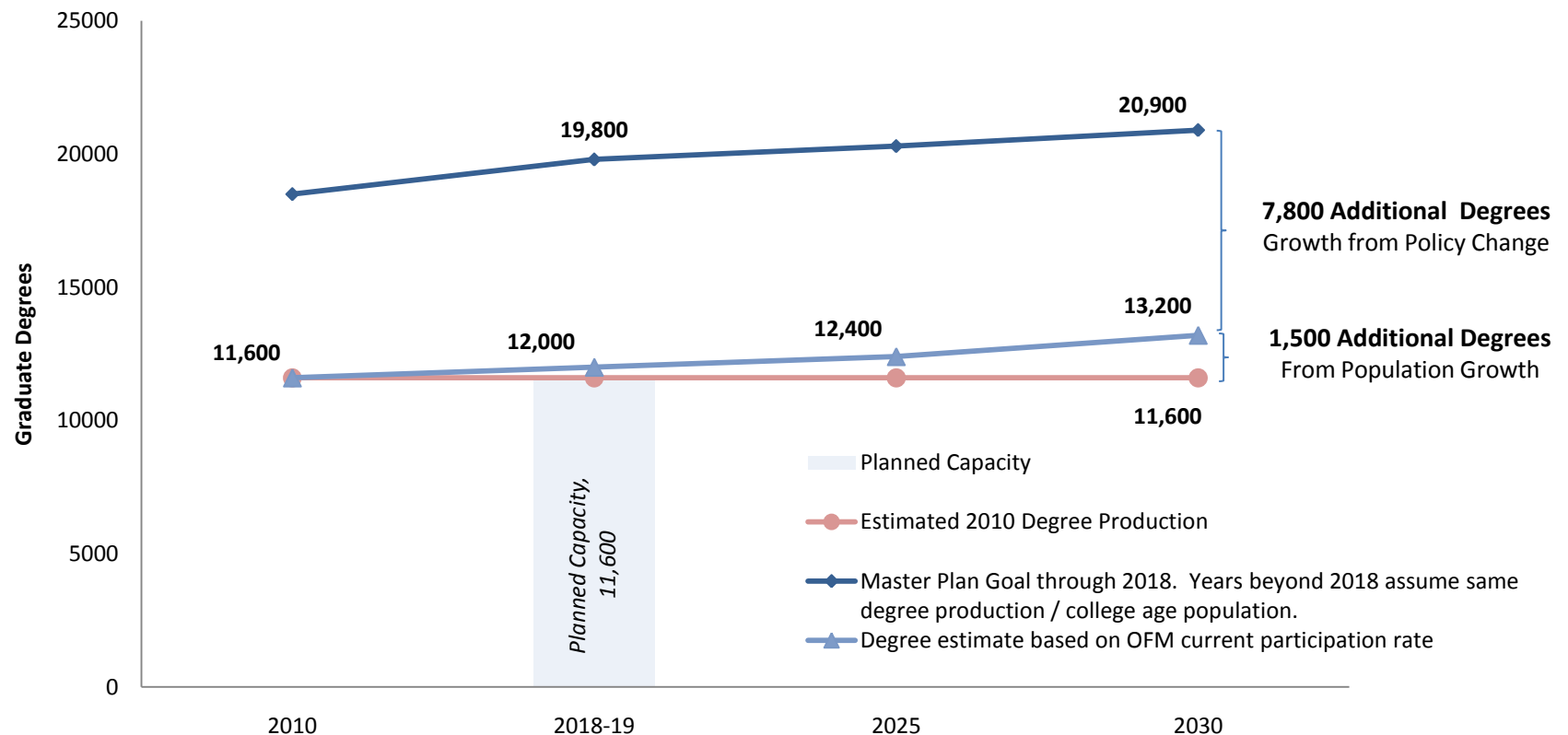
Bachelor's Degree Awards: IPEDS

Degree Goals: 2008 Strategic Master Plan; Projection to 2030 HECB staff calculation based on 2008 Population forecast of 18-44 year olds.

Institutional Degree Award Plans: 2008 Enrollment Capacity Study, HECB, 2008

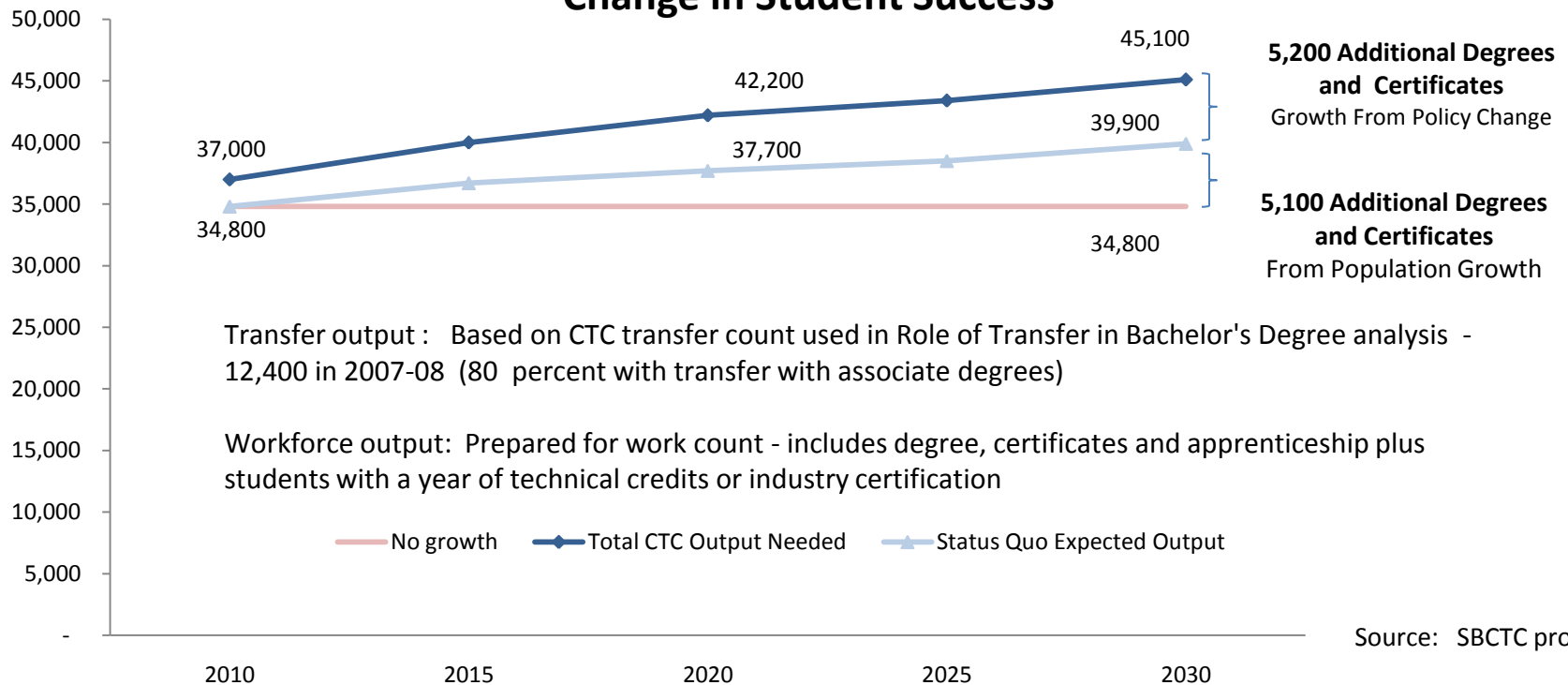
There is insufficient capacity at the **graduate level** to maintain current participation rates. Reaching the *Master Plan* goals will require nearly doubling planned capacity.

### Graduate Degree Goals and Capacity Includes Public and Private Institutions



10,300 CTC output growth needed (2010-2030) to meet employer demand and *Master Plan* bachelor's degree goal – 5,100 growth from population changes (status quo expected output), 5,200 from policy change

### Projected Need for CTC Outputs (Transfer & Prepared for Work) Versus Projected Output Based on Population Growth Only and No Change in Student Success



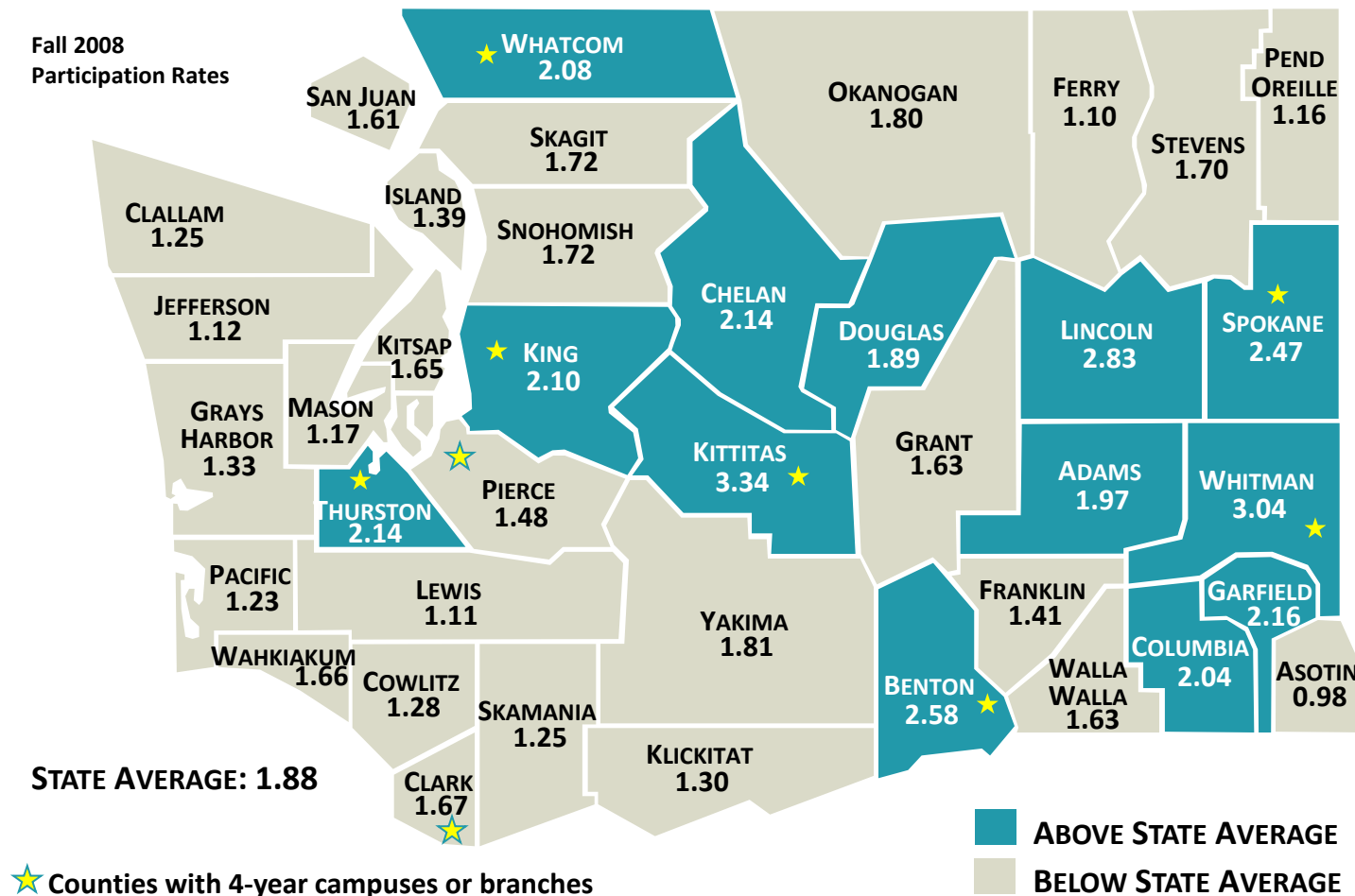
Source: SBCTC projection

## What is the current enrollment in Washington higher education?

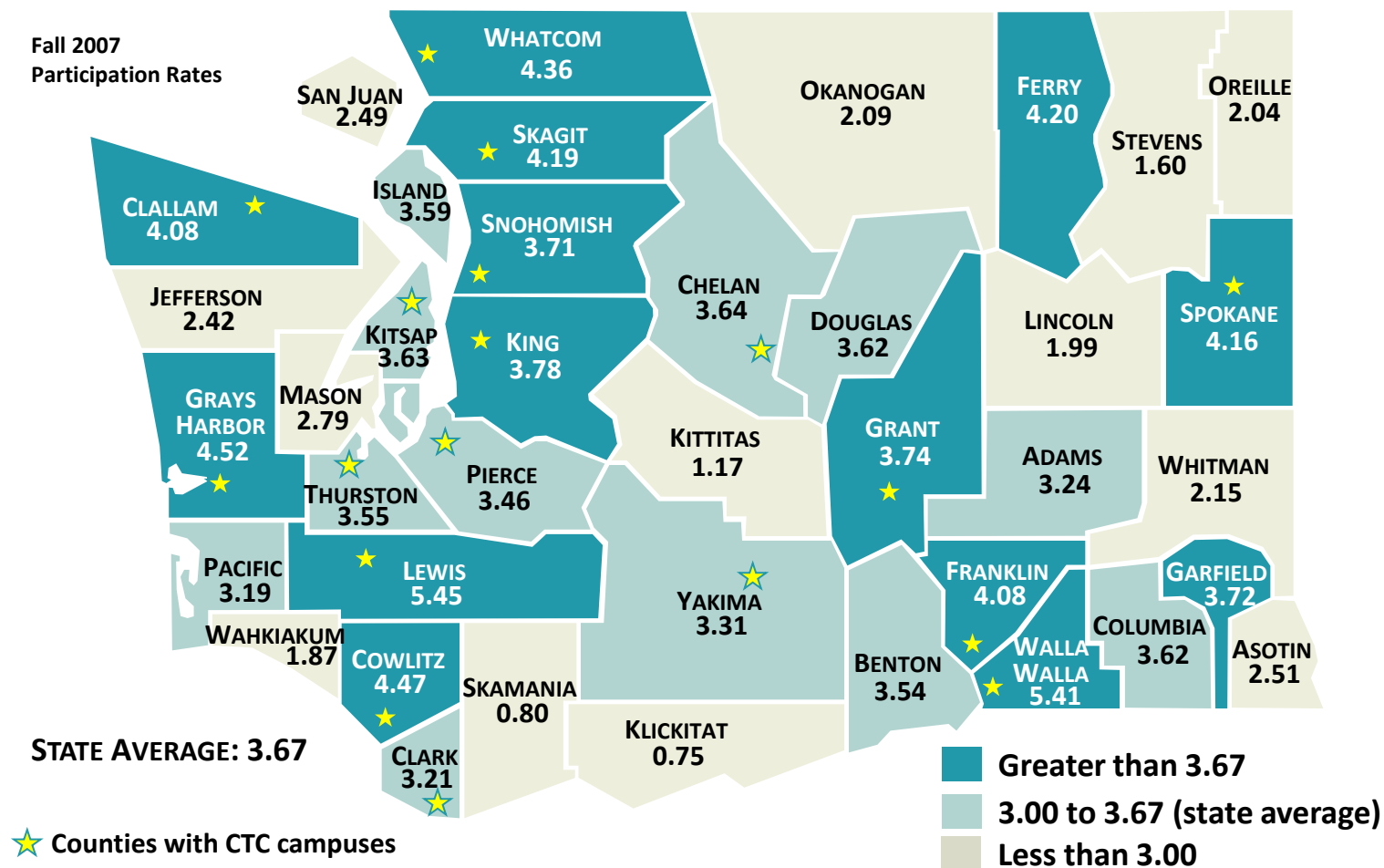
Of the residents in a **region**, how many participate in higher education?

## How does participation vary by geography?

As the map shows, participation rates – in this case public 4-year participation rates as a percentage of the population age 17-64 – are influenced by proximity to an institution.



CTC participation is also strongly related to the proximity of a campus.



Sources: SBCTC Management Information System (MIS) Reports, OFM County Population Estimates.

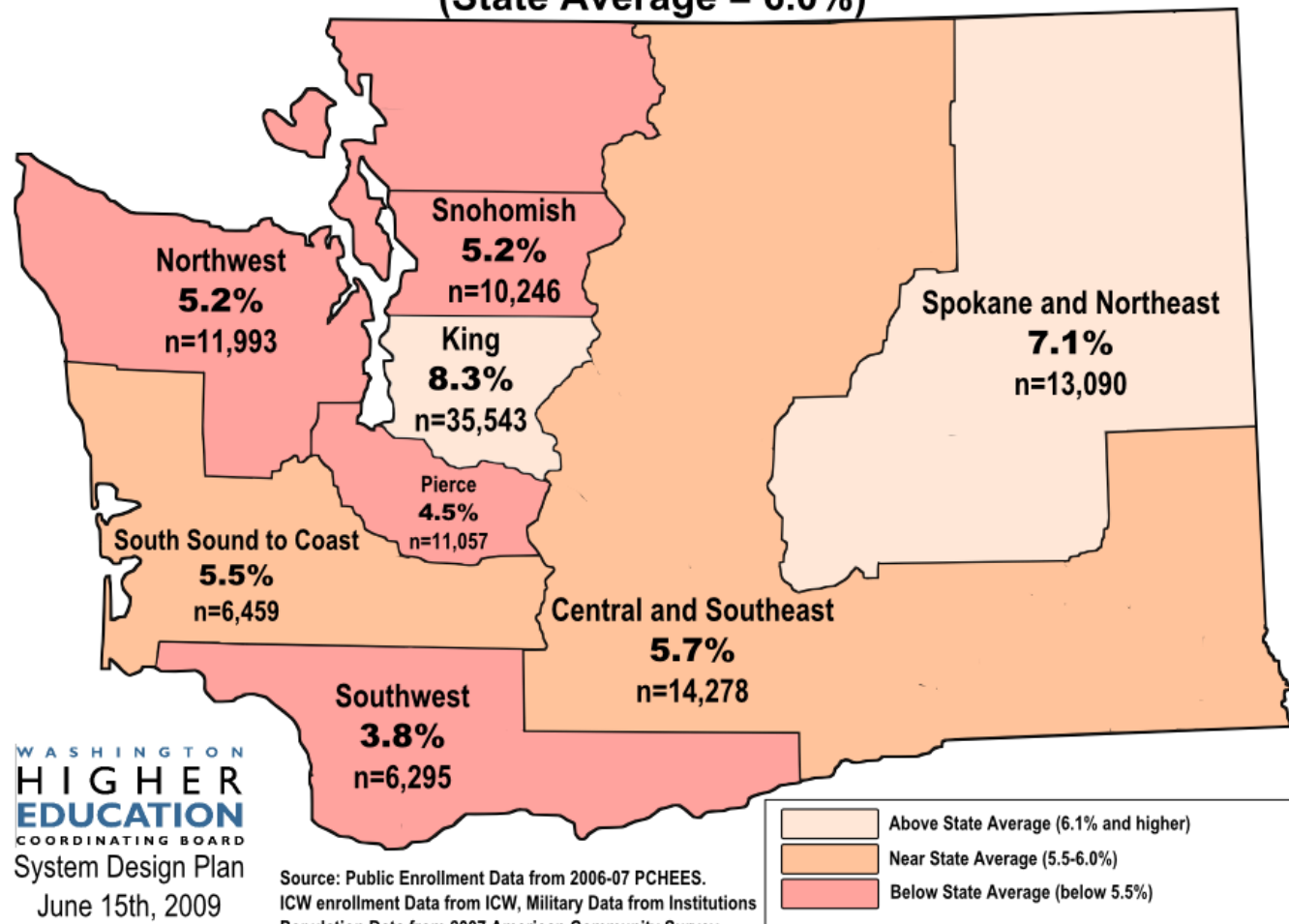


Looking at only those 18-44 year olds with less than a bachelor's degree, the 4-year undergraduate participation rates vary across regions of the state. The highest rates are in King County and the Spokane & Northeast region. The lowest rates are in the Southwest region and Pierce County.

## Public and ICW 4-Year Undergraduate Participation Rate

of Region Population Ages 18-44 With Less than a Bachelor's Degree

(State Average = 6.0%)

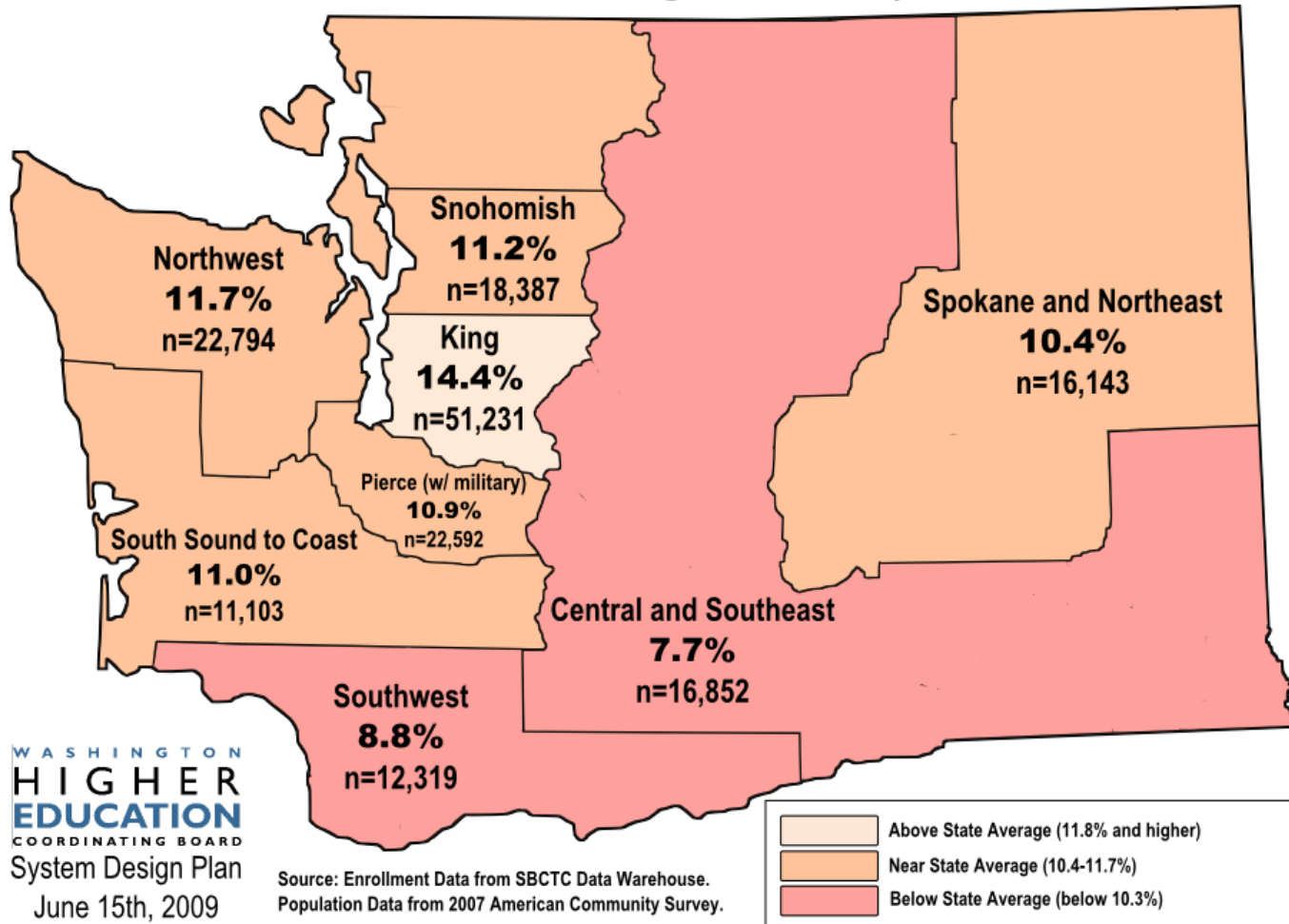


The public 2-year participation rates vary across regions. The highest rate is in King County. The lowest rates are in the Central & Southeast and Southwest regions.

## College-Level Community and Technical College Participation Rate

of Region Population, for "College-Level" Students Excluding ABE/GED, ESL, Worker Retraining, and those with an Associate's Level Degree or Above

(State Average = 11.2%)



King is the only county in which the 4-year and 2-year participation rates are above the statewide average.

## Baccalaureate and CTC Undergraduate Participation Rates & Enrollments By Region

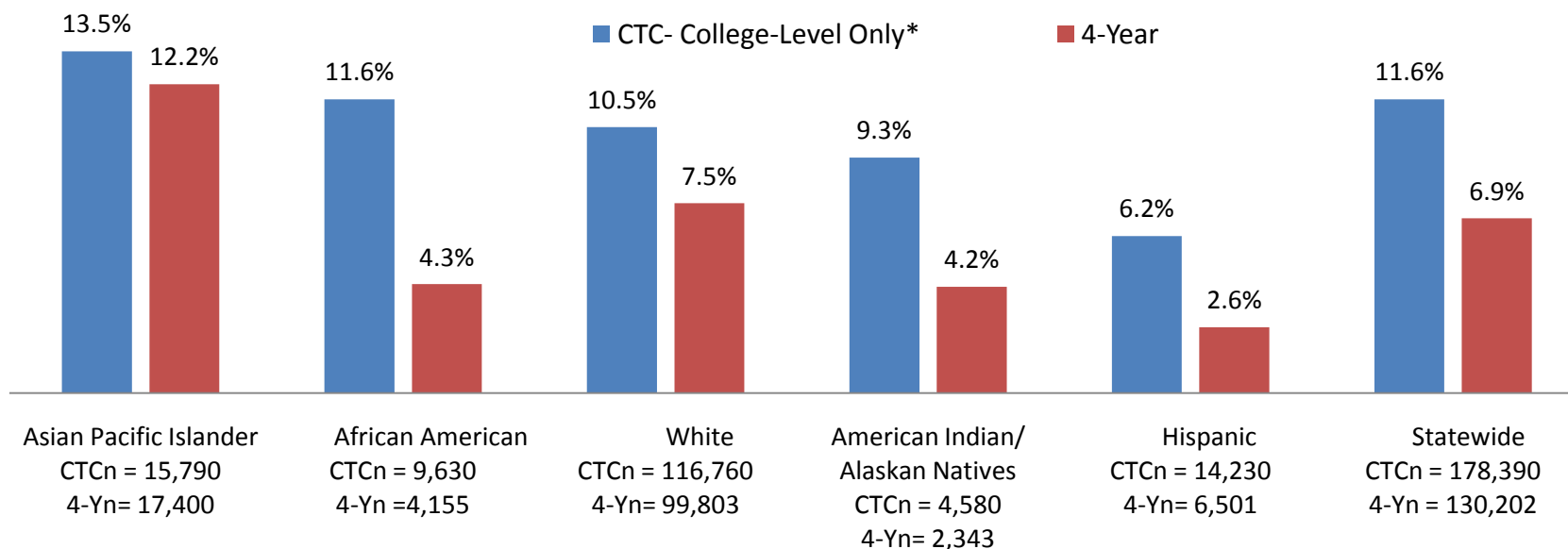
Region	Baccalaureates		CTCs	
	Participation Rate	N	Participation Rate	N
<b>Statewide</b>	<b>6.0%</b>	<b>108,961</b>	<b>11.2%</b>	<b>171,421</b>
King County	8.3%	35,543	14.4%	51,231
Spokane & Northeast Region	7.1%	13,090	10.4%	16,143
Central & Southeast Region	5.7%	14,278	7.7%	16,852
South Sound to Coast Region	5.5%	6,459	11.0%	11,103
Northwest Region	5.2%	11,993	11.7%	22,794
Snohomish County	5.2%	10,246	11.2%	18,387
Pierce County	4.5%	11,057	10.9%	22,592
Southwest Region	3.8%	6,295	8.8%	12,319

Source: Population data are from the 2007 American Community Survey. For the baccalaureate enrollments, the public data are from the PCHEES data base; ICW data are from IPEDS; and the military data are from the individual institutions. The CTC enrollment data are from the SBCTC data warehouse. The populations used to calculate the participation rates are different for the 4-year sector and the 2-year sector. For the 4-year participation rates, the population is 18-44 year olds with less than a bachelor's degree. The 2-year participation rates include those age 18-44 with less than an associate degree.

**What is the current enrollment in  
Washington higher education,  
by race/ethnicity?**

Participation rates for Hispanic students are low at both CTCs and 4-year institutions. Rates for African-American & American Indian/Alaskan Native students are low at 4-year institutions.

**4-Year (Public & ICW) and CTC "College-Level" Participation Rates\*\* for 18-44 Year Olds  
by Race/Ethnicity - 2006-07**



- CTC enrollment compared to the population with less than an associate degree. The higher CTC participation rate is because the colleges serve more students and the divisor is smaller.
- 4-Year enrollment compared to the population with less than a bachelor's degree.

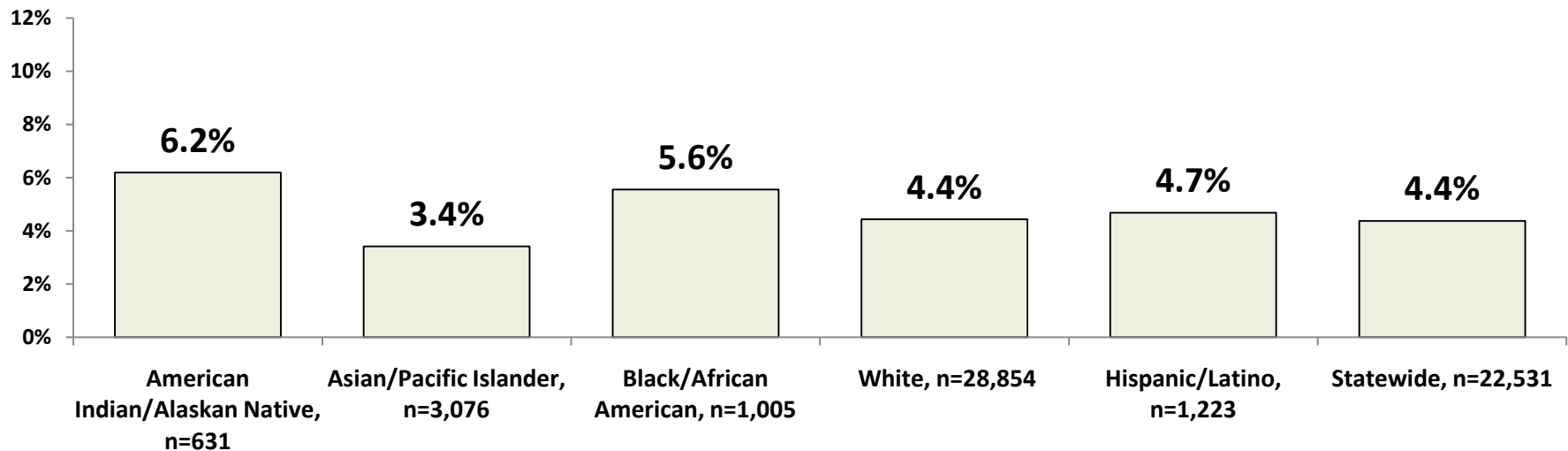
\*Excludes students in ABE/GED/ESL programs, students with associate degrees or higher at the start of college, and dislocated workers.

\*\*Reflects duplicated counts for individuals reporting two-or-more races for both enrollees and the population. Enrollments include in-state and out-of-state students (excluding international students).

Source: SBCTC data warehouse, 2006-07 PCHEES for public 4-years, IPEDS for ICW data. Population data from 2007 American Community Survey.

Graduate and professional participation rates are similar for all racial/ethnic groups, suggesting that individuals with a bachelor's degree from different racial/ethnic backgrounds are equally likely to go on to graduate or professional education.

### Public 4-Year and ICW Graduate/Professional Participation Rates\* of Those Age 18-64 with a Bachelor's Degree by Race/Ethnicity



\*Reflects duplicate counts in which two-or-more races are distributed among all indicated racial groups for both the enrollees and the population.

Sources: Enrollment data are for 2006-07. The enrollment data for the public 4-year institutions are from PCHEES and the enrollment data for the ICW institutions are from IPEDS. The population data are from the 2007 American Community Survey.

### Public 4-year Race-by-Region Undergraduate Participation Rate of those Age 18-44 with Less than a Bachelor's Degree

*The table reads "American Indian/Alaska Native public 4-year undergraduate students from the Northwest region are 2.5% of the Northwest region's population age 18-44 with less than a bachelor's degree. In 2006-07, 266 American Indian/Alaska Native students from the Northwest region were enrolled in Washington's public 4-year institutions.*

Race/Ethnicity		Northwest	Snohomish	King	Pierce	South Sound To Coast	Southwest	Central & Southeast	Spokane & Northeast	Statewide
American Indian/ Alaska Native	Part Rate	2.5%	2.4%	4.2%	2.8%	2.9%	2.1%	3.1%	4.3%	3.1%
	#Undergrads	266	138	393	173	143	82	235	235	1,665
Asian/ Pacific Islander	Part Rate	7.2%	10.1%	12.3%	5.8%	13.8%	6.9%	10.6%	11.1%	10.1%
	#Undergrads	971	1,789	7,818	1,378	653	502	665	507	14,284
African American/Black	Part Rate	2.5%	3.0%	3.1%	2.8%	4.5%	3.0%	5.1%	5.1%	3.2%
	#Undergrads	145	221	1,367	622	133	89	137	184	2,899
White	Part Rate	4.7%	4.8%	8.3%	3.5%	4.8%	3.6%	6.6%	6.0%	5.5%
	#Undergrads	8,541	6,986	21,805	6,235	4,442	5,013	9,813	9,013	71,848
Hispanic	Part Rate	2.0%	1.7%	2.2%	1.7%	1.8%	1.3%	1.7%	2.4%	1.9%
	#Undergrads	376	348	1,208	386	222	196	1,400	489	4,627

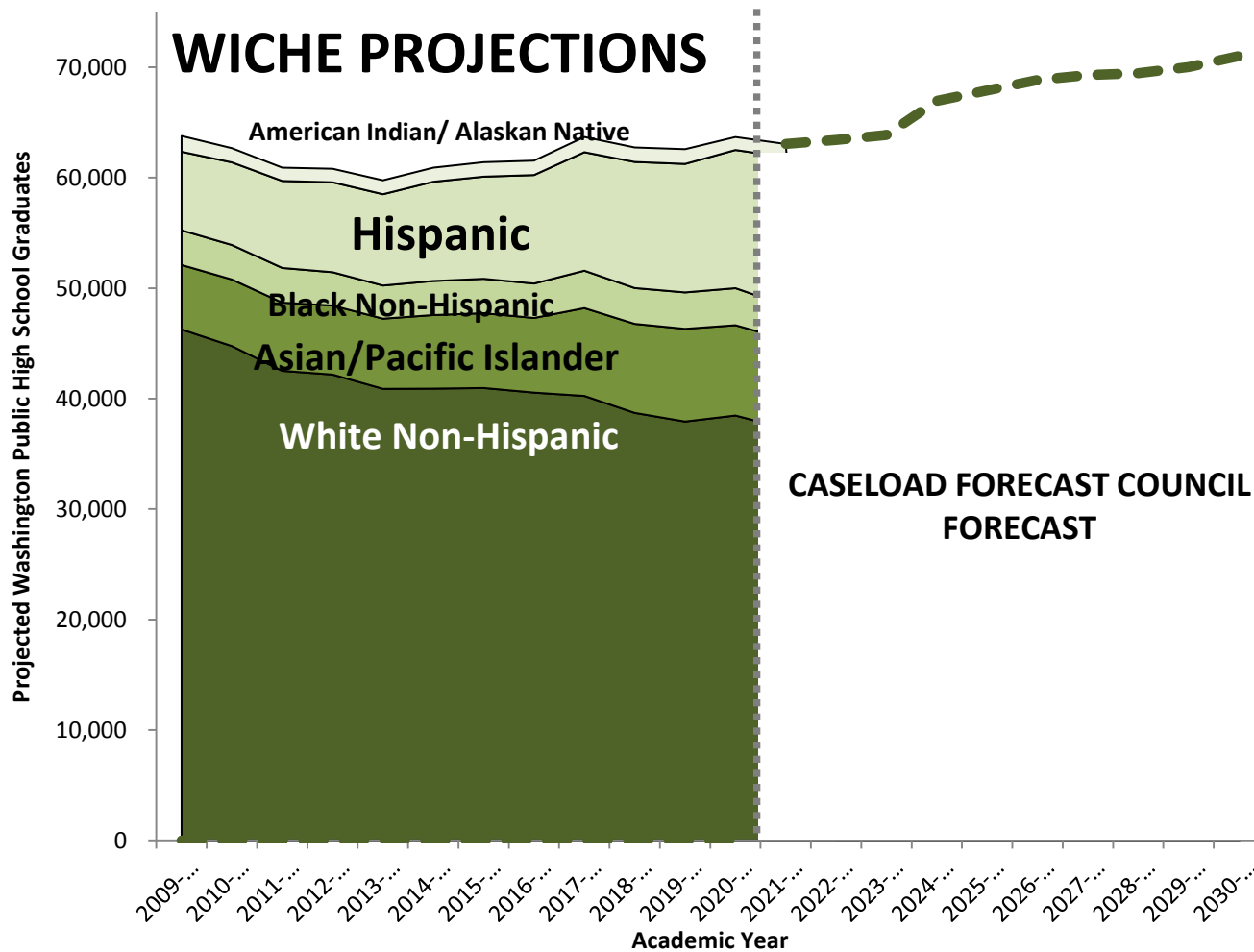
Source: Enrollment data are from 2006-07 PCHEES. Population data are from 2007 American Community Survey.

## Who is in the potential pipeline of students?

- The diversity of high school graduates will increase dramatically, but many may not go on to college.
- High school students tend to go to college close to home.
- Additional college enrollments resulting from population growth won't be high enough to bring about the increased educational attainment the state needs.
- Adult learners are a potential source of additional students and include:
  - working adults
  - re-entry students
  - underprepared students



Although diversity of the student body in the pipeline will increase, many may not go on to higher education.



Projections show that the diversity of Washington public high school graduates will increase considerably. Hispanic/Latino students will increase the most, but are less likely to continue directly to college. To increase the overall number of high school graduates going directly to college, we must increase the number of Hispanic/Latinos going on to college.

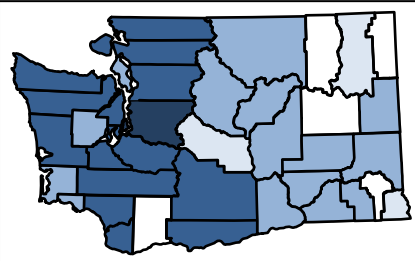
Source: WICHE projections from *Knock, Knock Who's There. Findings from WICHE's Projections of High School Graduates by State and Race/Ethnicity*. Caseload Forecast Council forecasts are HECB calculations of high school graduates based on the Caseload Forecast Council's grade 12 caseload forecasts .

# Where do students go to school?

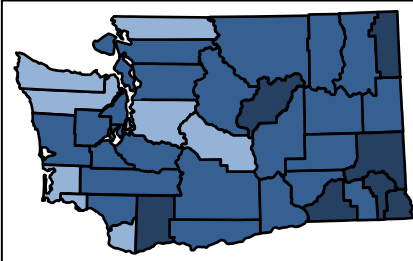
Proximity counts: High school students tend to go to college close to home.

## Share of County Students Enrolled: High School Entrances, Fall 2008

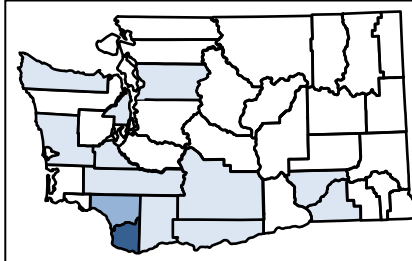
**UW-Seattle (28.4%)**



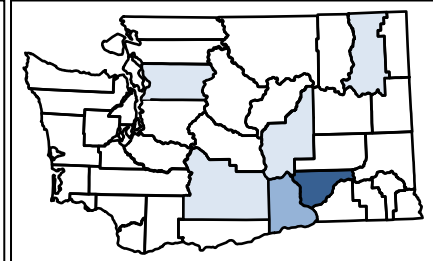
**WSU-Pullman (22.7%)**



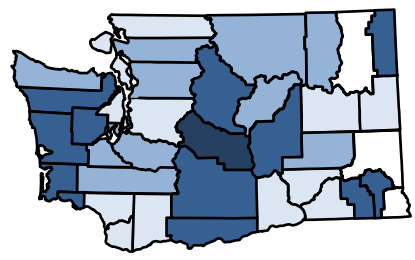
**WSU-Vancouver (1.6%)**



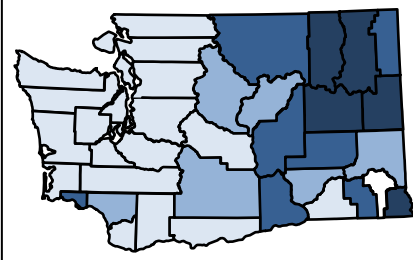
**WSU-Tri-Cities (0.6%)**



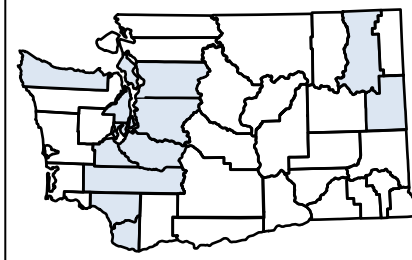
**CWU (11.5%)**



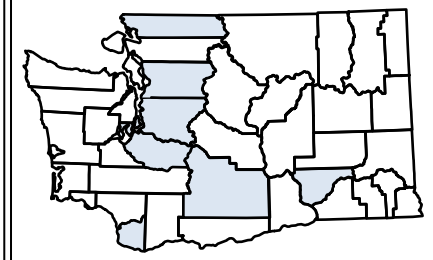
**EWU (10.3%)**



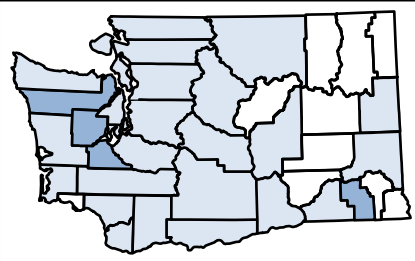
**UW-Tacoma (1.4%)**



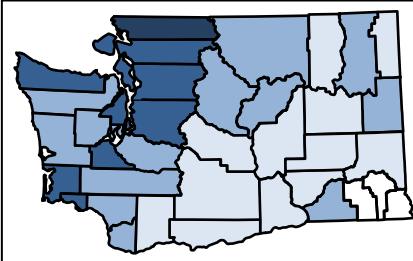
**UW-Bothell (1.7%)**



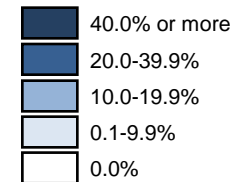
**TESC (2.9%)**



**WWU (18.8%)**



Numbers in parentheses indicate share of all students entering from high school attending the institution. For example, 28.4% of students entering from high school attend UW-Seattle.



The educational “pipeline” includes large numbers of students who should be encouraged to consider college.

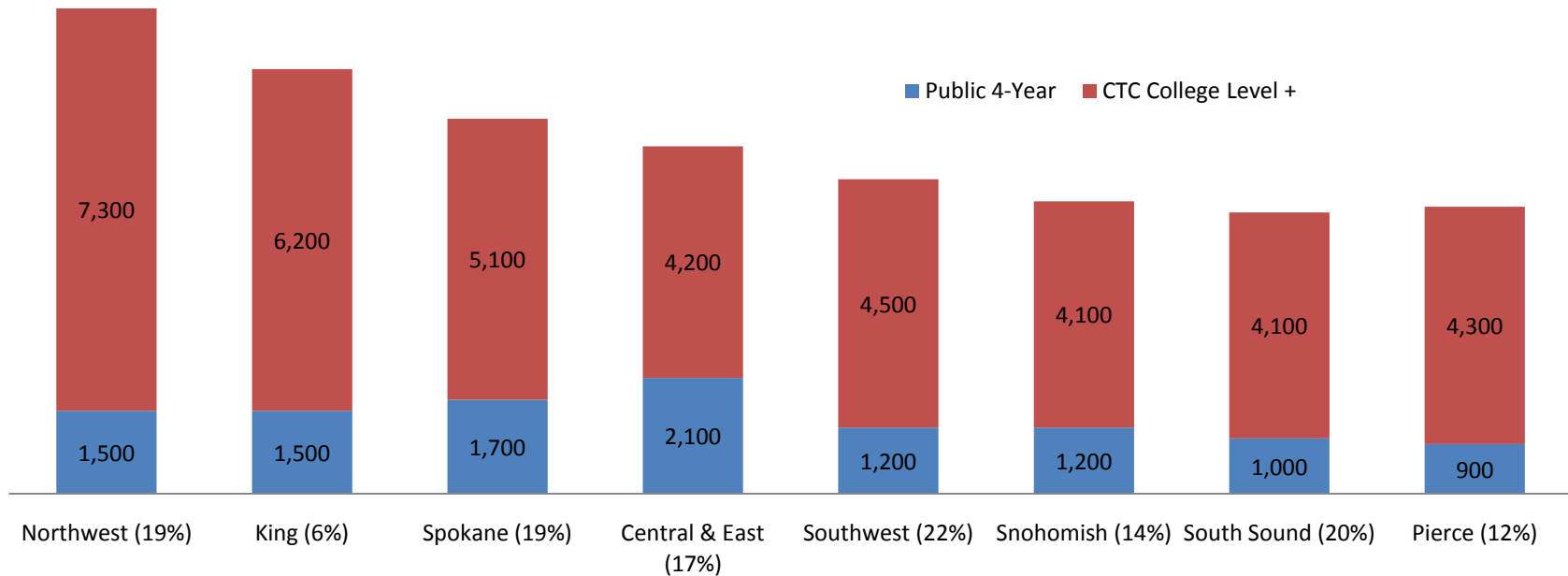
	2006-07 Completers	% of Completers who do not go on Next Level	Potential Additional Students who may Continue
High School Graduates*	65,300	43%	28,100
GED Completers	16,600	61%	10,100
Private Vocational School Degrees	12,700	n/a**	up to 12,700
Technical Degrees	7,350	87%	6,400
Transfer Associate Degrees	12,540	29%	3,640
TOTAL	114,490		48,240 – 60,940

Sources: OSPI 2007 Graduate Follow-up Study (SESRC); GED Testing DATA (SBCTC); SBCTC Completions Files.

\*Total graduates and estimated potential based on percentage of respondents who reported continuation to college.

\*\*Continuation data for private career school graduates are not currently available.

4-year undergraduate growth-based population change and status quo participation rates are largest in the Central & East; the largest CTC “College-level+” growth in the Northwest.



- ( % ) Indicates growth rate in region over next 20 years – 2010 projections to 2030.
- Public 4-year at bachelor’s level only; excludes graduate and professional degree-seeking students.
- CTC “College-level +” includes adults with an associate degree or higher and worker retraining students. The CTC numbers excludes ABE/GED and ESL students.

Source: SBCTC and HECB projections based on CTC state-supported participation rates and public 4-year participation rates for 2006-07 applied to OFM population projections of age group by region.

**How many who start college are  
really “college-ready?”**

Strong preparation in English and math is critical to improving college readiness.

- Among public high school graduates (2007) attending a public college or university in their first year after graduation:
  - 33 percent who enrolled in college took at least one remedial course (English or math, or both).
  - **55 percent** who enrolled at a 2-year college took at least one remedial course, and **10 percent** took a remedial course at 4-year colleges.
  - Over twice as many graduates enrolled in remedial math as in remedial English.
- In 2008, 35% of high school graduates failed to meet the minimum public 4-year college admissions standards in math – more than any other subject area.

Sources: SESRC 2007 Graduate Follow-Up Study, Washington State Board of Education Transcript Study (2008).

Improvements in science preparation will also be necessary to prepare more students to enter STEM fields.

- In 2008, 12% of high school graduates failed to meet the minimum public 4-year college admissions standards in science.
- 31% of high school graduates did not take a math course in their senior year of high school, and 52% did not take a science class.
- Only 55% of 2008 high school graduates met the new CORE 24\* minimum graduation requirements in science; 89% met the math requirement.
- Among 2008 Washington high school seniors taking the SAT, 34% had not taken pre-calculus/calculus, and 54% had not taken physics.

\*CORE 24 high school graduation requirement information is available at:  
[http://www.sbe.wa.gov/documents/core24Final12-19-08\\_001.pdf](http://www.sbe.wa.gov/documents/core24Final12-19-08_001.pdf).

## **Who could potentially be a student . . . but isn't?**

What do we need to consider about potential students' learning styles and preferences?



"In every state, there are significant numbers of the working-age population who have already earned some college credit. If we focus first on these residents – those who have some college but have not yet earned a degree – we can begin to turn the tide fairly quickly." (Lumina Foundation for Education, *A Stronger Nation through Higher Education*, February 2009.)

**Washington's Residents Age 18-44 whose Highest Educational Attainment is "Some College, No Degree"**

By Region	Total with "Some College, No Degree"	% Not Enrolled in College	# Not Enrolled in College
Northwest	84,958	68%	58,079
Snohomish	66,027	78%	51,562
King	162,094	68%	110,352
Pierce	79,508	81%	64,462
South Sound to Coast	40,404	76%	30,637
Southwest	58,089	73%	42,359
Central & Southeast	71,172	55%	38,939
Spokane & Northeast	66,107	66%	43,542
State Total	628,359	70%	439,932

By Race/Ethnicity	Total with "Some College, No Degree"	% Not Enrolled in College	# Not Enrolled in College
American Indian/Alaska Native	5,731	72%	4,110
Asian/Pacific Islander	39,116	61%	23,832
African American/Black	29,275	65%	19,170
White	483,864	71%	344,503
Multi-racial	24,741	63%	15,634
Hispanic	45,632	72%	32,683
Total	628,359	70%	439,932

Source: 2007 American Community Survey.

Adult learners comprise at least half of the students enrolled in credit programs nationally.

- In 2008, adult learners were about 50% of the 18.3 million total higher education credit enrollments.
- 40% of undergraduate students and 80% of graduate students were adult learners.
- In 2008, the majority of adult learners were female; non-minority; employed & juggling work, home, school; self-financed.
- Adult learners are getting older – late 30's-early 40's.
- Continuous growth in adult-learner enrollments is predicted.

Source: Aslanian, C. *Adult Students: A Profile of Demand Among Classroom and Online Adult Students*. Aslanian Group. 2008. Accessed at <http://www.aslaniangroup.com/resources/default.asp> May 20, 2009.

The number of Washington's residents 18-44 whose highest educational level is a "high school diploma or less" is substantial. This is an important target population for raising educational attainment in Washington.

**Washington Residents Age 18-44 whose Highest Educational Attainment is a High School Diploma or Less**

	Total		
By Region	"High School or Below"	% Not Enrolled in School	# Not Enrolled in School
Northwest	114,657	90%	103,206
Snohomish	102,404	91%	93,372
King	202,252	89%	179,691
Pierce	133,584	92%	122,406
South Sound to Coast	64,791	91%	58,886
Southwest	90,061	92%	83,009
Central & Southeast	152,856	92%	140,764
Spokane & Northeast	91,572	91%	83,661
State Total	952,177	91%	864,995

	Total		
By Race/Ethnicity	"High School or Below"	% Not Enrolled in School	# Not Enrolled in School
American Indian/Alaska Native	21,781	92%	19,935
Asian/Pacific Islander	57,715	86%	49,848
African American/Black	41,475	91%	37,810
White	612,231	90%	551,613
Multi-racial	29,109	88%	25,628
Hispanic	189,866	95%	180,161
Total	952,177	91%	864,995

Source: 2007 American Community Survey.

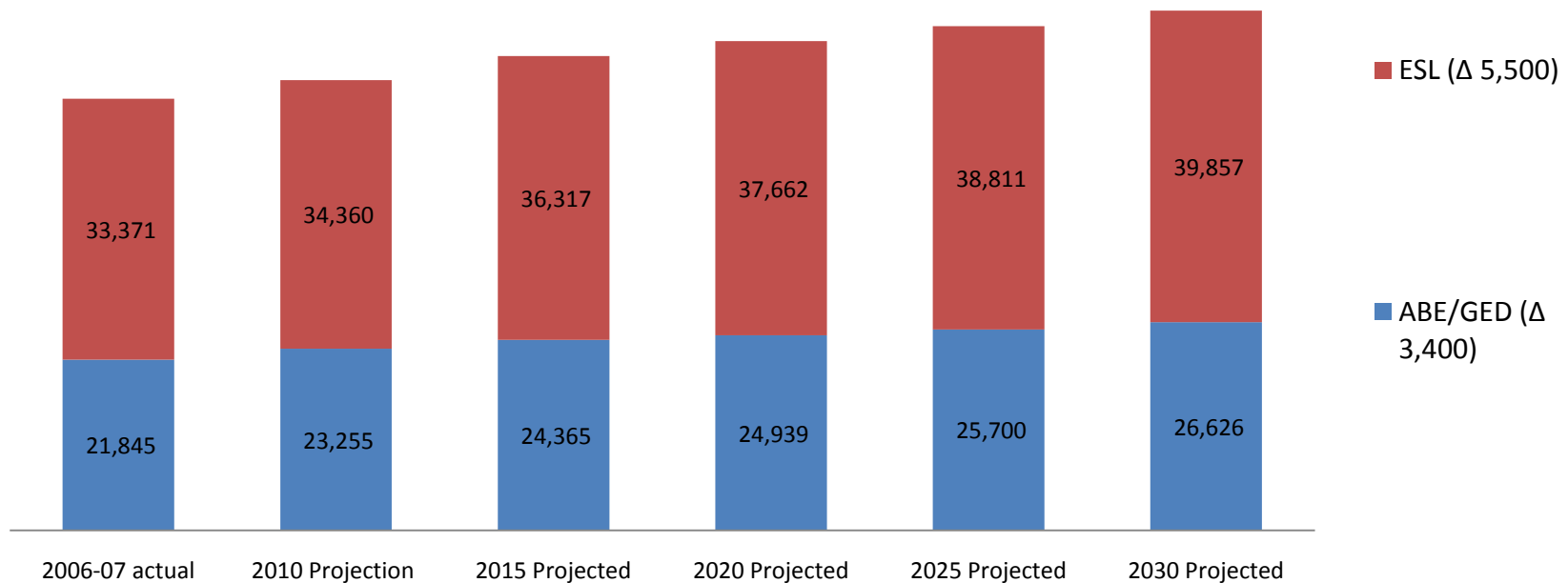
Working-age adults with no more than a high school education are a critical part of the pipeline for increasing bachelor's degree attainment.

- 630,000 Washington state adults 25-44 years old have a high school education or less.
- This group is 8 times as large as the 2007 high school senior class.
- One in five (136,000) are limited English speakers.
- They also are low income and low socio-economic status. They need financial aid, but often start in programs that don't qualify.
- They come to college later for workforce education. Many start with basic skills courses.
- They need innovative pathways that can accelerate their learning and, for those who can benefit, they need to be able to go on to bachelor's degrees.

Sources: SBCTC calculation based on 2007 American Community Survey & OSPI Public School 12 Grade Enrollments , October 2007. SBCTC Research Report 06-4

[http://www.sbctc.ctc.edu/docs/data/research\\_reports/resh\\_06-4\\_socioconstudy.pdf](http://www.sbctc.ctc.edu/docs/data/research_reports/resh_06-4_socioconstudy.pdf)

Population-based growth in ABE/GED and ESL students will not be enough to meet the need to educate more adults.



- 8,900 growth (headcount) at CTCs needed to keep pace with population for ABE/GED and ESL students in next 20 years (based on 2006-07 state-supported participation rates for ABE/GED and ESL students).
- 15% overall growth based on population only.
- Δ means the change in headcount over next 20 years - between the 2010 projection and the 2030 projection.

Source: SBCTC projections based on state supported participation rates.

Nationally, current students taking online courses tend to be older, undergraduate students familiar with college; 1/2 prefer asynchronous academic & student services.

- 95% have access to a computer at work and/or home.
- Prefer asynchronous – their time, their place.
- Learning preferences: 50% classroom; 30% hybrid; 20% online.
- 50% have completed some college.
- 40% are interested in a Bachelor's degree; 25% Associate degree; 25% Master's degree.
- 67% enroll in an institution in their region.

E-learning is expected to continue to reach an increasing number of students.

In Washington, distance learning is 11.1% of total 2-year instruction:

- 10% (15,000) of the CTC total FTEs are eLearning, with online delivery the predominant mode.
- 15% growth in eLearning per year, outpacing the nation; 41% growth from winter '08 to winter '09.
- by 2019, 45% of CTC system FTE will be enrolled in at least 1 online or hybrid course.

Source: OFM *Higher Education Trends and Highlights*. February 2009; SBCTC Fall Report 2007; Gable Green, SBCTC

## **Who are the faculty?**

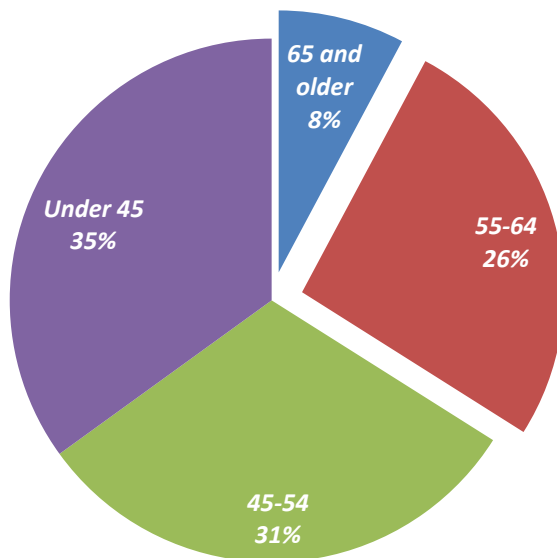
Will they be available and ready to teach tomorrow's students?



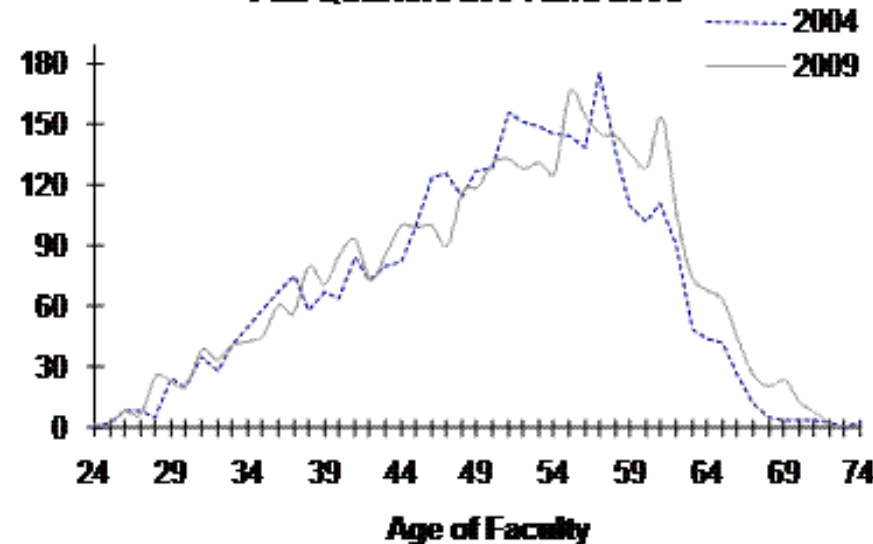
55 - 60% of the faculty needed in 2030 are in school today.

As our higher education system grows, we will see increasing pressure to train and recruit faculty to replace current faculty and grow our higher education system.

**Age Profile of Public Baccalaureate Faculty (2004)**



**Full-Time Faculty Age Distribution  
Fall Quarters 2004 and 2008**

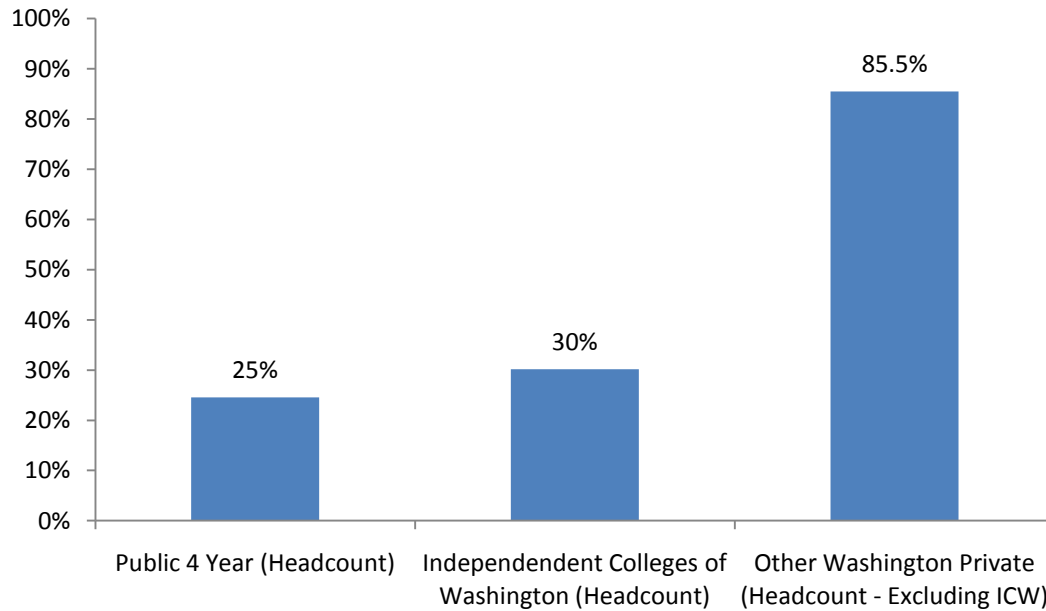


25% - 33% of current faculty expect to work until at least age 70.

Even when longer careers are taken into account, by 2030 most of the current faculty (at least 55%) will be retired and the rest will be close to retirement age – today's 44-year-olds will be 65 in 2030.

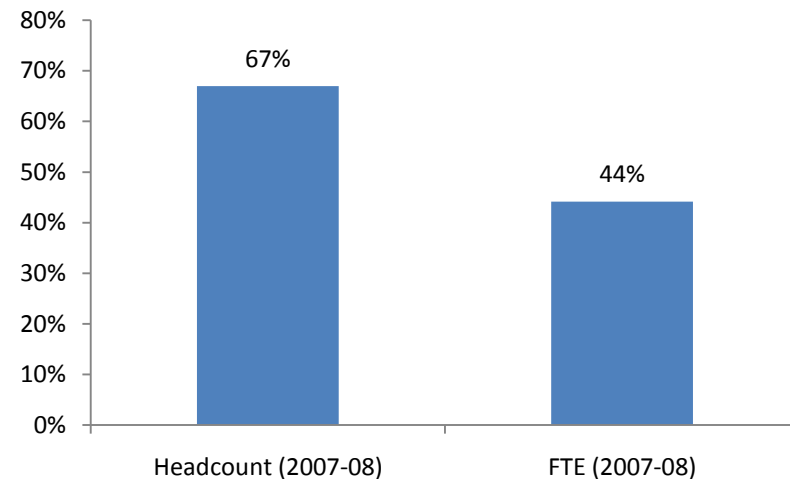
**Part-time faculty contribute significantly to instruction and are particularly important in the community and technical colleges and the private colleges and universities.**

**Part-Time Faculty in Washington  
Baccalaureate Institutions**



Source: Baccalaureate Institutions: IPEDS Fall 2007 Staff Survey.

**Part-Time Faculty in  
Community and Technical  
Colleges**



Source: SBCTC Academic Year Report (2007-08).

**Note:** 55% of state-supported credit hours at the CTCs are taught by full-time faculty.

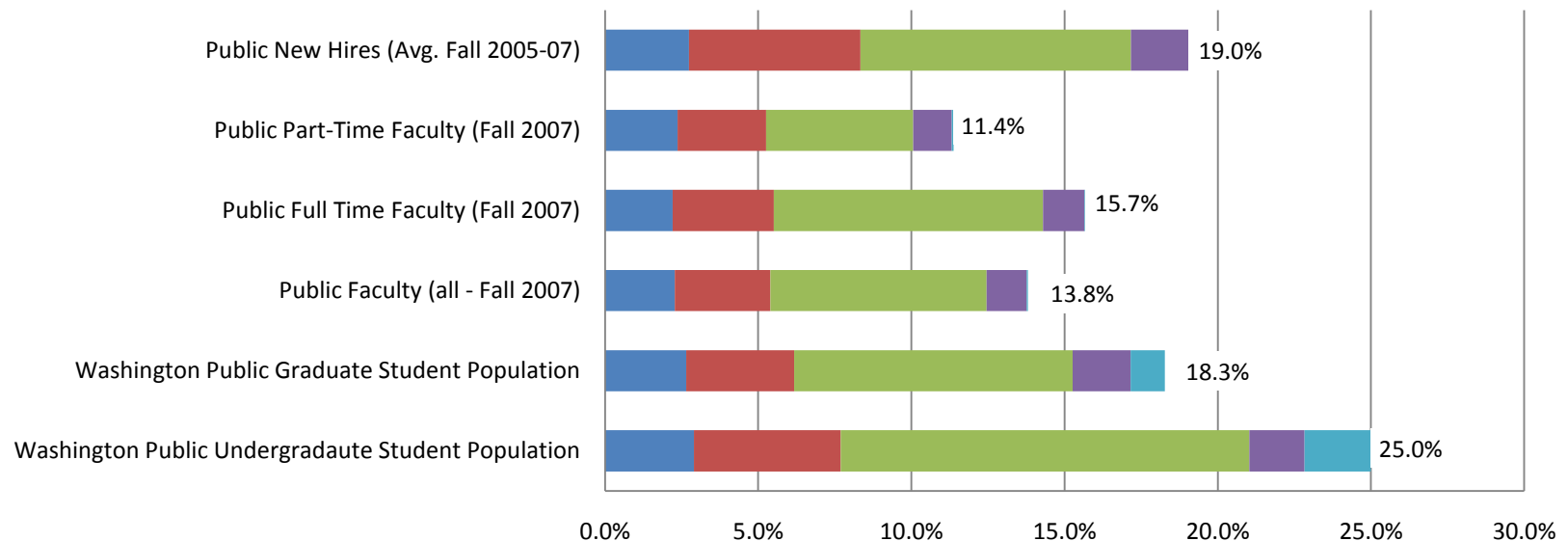
Across all higher education sectors, students are more diverse than the faculty.

	Total	White non-Hispanic	Black non-Hispanic	Hispanic	Asian or Pacific Islander	American Indian or Alaska Native	Multiple/Other	Non-Resident Alien
<b>Public 4-Year</b>								
Students (2006-07)	129,927	63.7%	2.8%	4.5%	11.3%	1.6%	12.2%	3.9%
Faculty (Fall 2007)	9,256	73.9%	1.7%	2.7%	8.2%	1.0%	7.3%	5.2%
<b>Private Not-For-Profit 4-Year</b>								
Students (2006-07)	51,434	67.3%	3.2%	2.4%	6.6%	1.4%	13.4%	3.4%
Faculty (Fall 2007)	4,793	82.1%	2.6%	2.4%	5.0%	0.9%	5.8%	1.1%
<b>Private For-Profit 4-Year</b>								
Students (2006-07)	11,886	67.6%	8.7%	6.4%	10.7%	2.1%	15.3%	2.8%
Faculty (Fall 2007)	1,085	80.8%	6.2%	2.3%	7.1%	0.1%	2.1%	1.4%
<b>Public 2-Year</b>								
Students (2008)	177,397	67.1%	6.4%	13.1%	11.1%	2.6%	2.2%	-
Faculty (Fall 2007)	9,423	87.6%	2.6%	3.5%	5.0%	1.3%	0.1%	-

Sources: IPEDS Fall 2007 Staff Survey, IPEDS 2006-07 Enrollment Data; SBCTC Enrollment and Staff Data. Note: SBCTC reporting excludes non-resident alien faculty and students. CTC student race ethnicity are reported alone or in combination.

Newly hired faculty are more diverse than existing faculty and closely reflect the diversity of the graduate student population.

## Faculty and Student Population By Race/Ethnicity Washington Public Higher Education Institutions



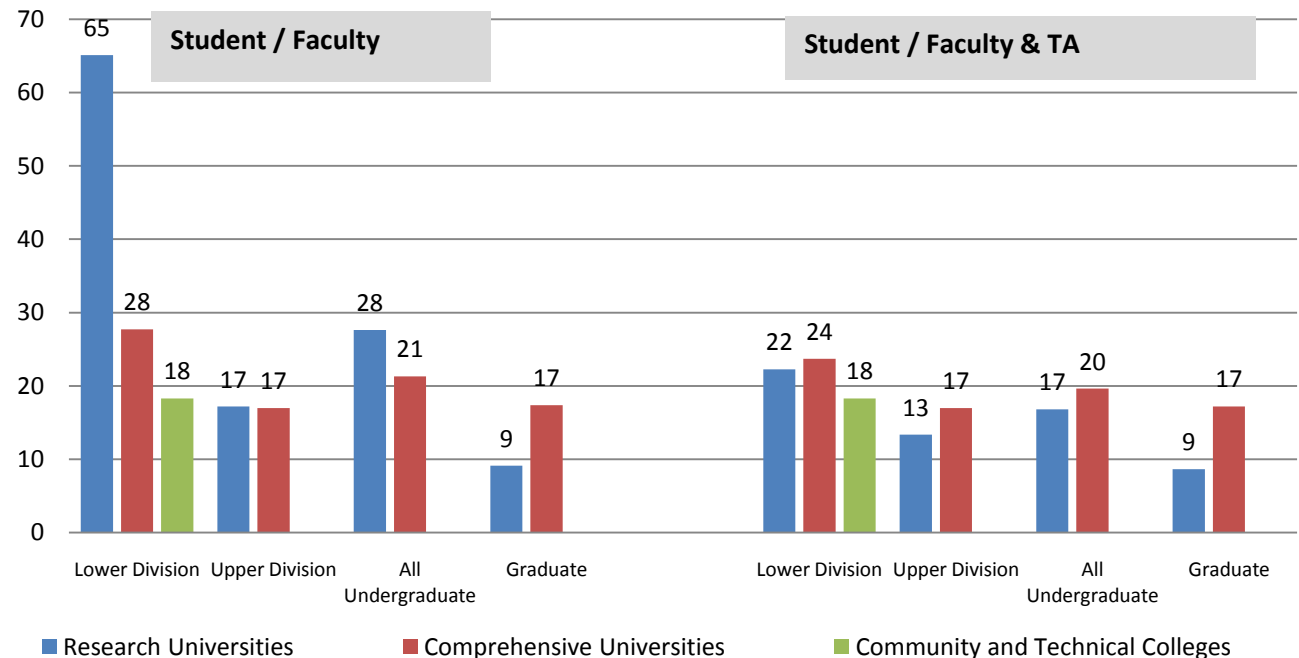
	Washington Public Undergraduate Student Population	Washington Public Graduate Student Population	Public Faculty (all - Fall 2007)	Public Full Time Faculty (Fall 2007)	Public Part-Time Faculty (Fall 2007)	Public New Hires (Avg. Fall 2005-07)
Black non-hispanic	2.9%	2.7%	2.3%	2.2%	2.4%	2.7%
Hispanic	4.8%	3.5%	3.1%	3.3%	2.9%	5.6%
Asian or Pacific Islander	13.3%	9.1%	7.1%	8.8%	4.8%	8.8%
American Indian or Alaska Native	1.8%	1.9%	1.3%	1.3%	1.3%	1.9%
Multiple/Other	2.2%	1.1%	0.0%	0.0%	0.1%	0.0%

Sources: SBCTC Personnel Data (Fall 2008), IPEDS Staff Survey (2005,06,07), ACS 2007, PCHEES

Graduate teaching assistants represent an essential part of the instructional staff at the research universities.

- Instructional staffing strategies vary by sector.
- Lower-division courses at the research universities rely heavily on TA's.

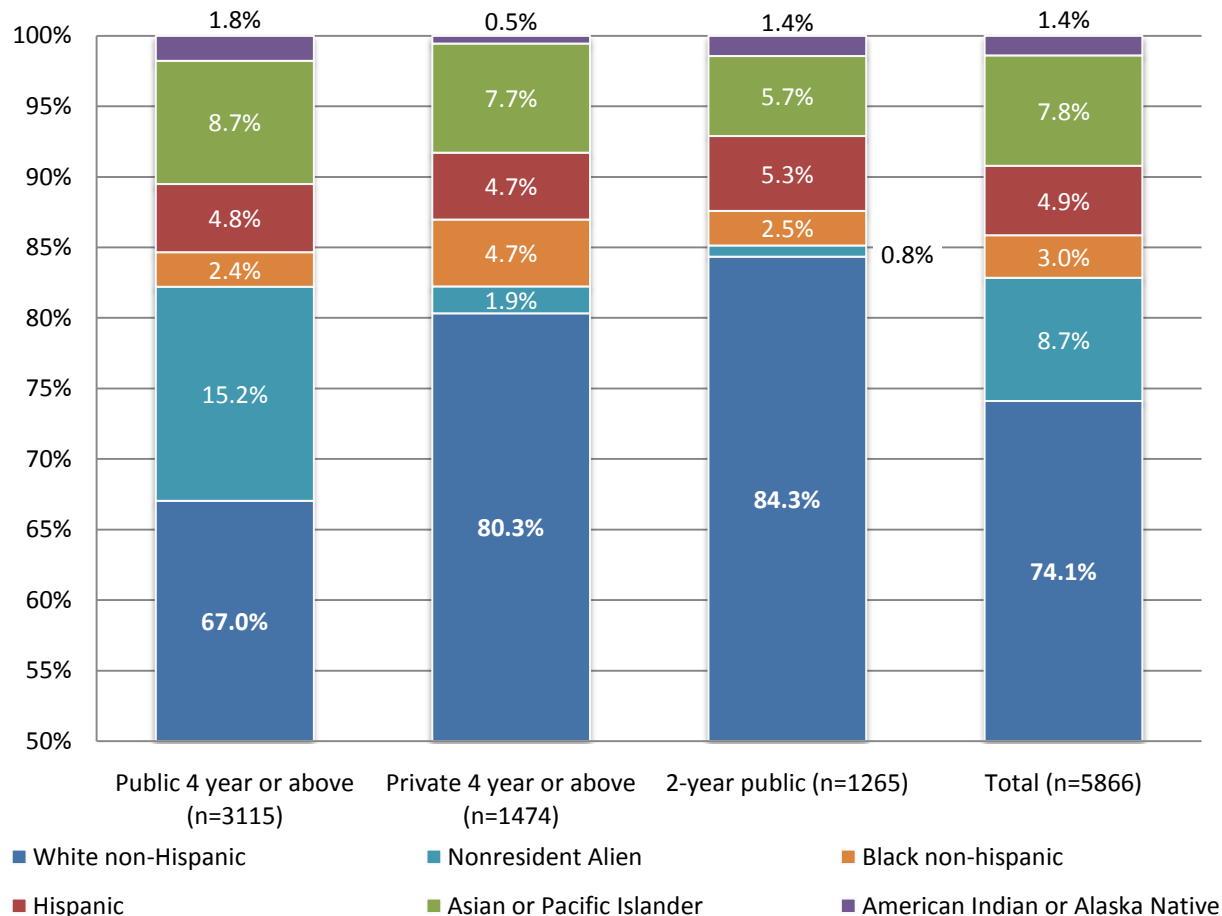
### Student / Faculty & TA Ratios 2005-06



Source: HECB 2005-06 Higher Education Cost Study

Public baccalaureates draw heavily from an international talent pool to fill faculty vacancies.

### Newly Hired Faculty by Race/Ethnicity and Sector Fall 2005, 2006, and 2007



Source: IPEDS Staff Survey 2005,06,07.

Note: 2-year privates excluded (n too small - 12 total hires reported to IPEDS).

## Discussion

What does the information about students—their characteristics and potential growth—tell us about System Design?

*Given the information presented this morning on participation rates, current capacity, and the need to grow the "pipeline" of students in multiple ways, what are possible alternatives to serve the growing demand for both baccalaureate and graduate degree production in the following regions – and for the state as a whole?*

- In East King
- In Snohomish
- In Kitsap
- In Southwest Washington
- Central Washington