

Role of Pre-College (Developmental and Remedial) Education 2008-09 Public High School Graduates Who Enroll in Washington Community and Technical Colleges in 2009-10

Revised April 2012

Introduction

As public accountability for post-secondary education shifts from access to student completion, a key question is how well prepared high school graduates are for college-level work. This report describes pre-college enrollments for public high school graduates attending community and technical college within one year of their high school graduation. The students described in this report graduated public high school in 2008-09 and enrolled in community and technical college in 2009-10.

Enrollments are counted for pre-college math, writing and reading/coordinated studies. Variations by race, ethnicity, gender, and enrollment rates by college are reported.

In addition to describing pre-college enrollments for students attending community and technical colleges within the first year after graduating high school, the report describes total state-supported pre-college enrollments for all students in 2009-10. The skill levels in these courses are important to subsequent college success. Identifying ways to advance students further and faster towards completion is the underlying goal of the system's Student Achievement Initiative. The colleges are engaged in major reform efforts to increase success for students who start less than college ready. The last section of this report describes those reform efforts.

An important note for how this report was done:

This report was done with assistance from the Education Research Center, who provided the data match to identify 2008-09 high school graduates. A student is included as a high school graduate in this report if he/she is reported in OSPI's academic year enrollment summary file with student enrollment status indicating "graduated with regular high school diploma" and was subsequently enrolled in a community and technical college anytime in 2009-10. The report focuses on students attending for academic transfer or professional/technical studies. Students are excluded if they enrolled exclusively for adult basic education or personal interest courses.

The findings in this report cannot be compared to previous reported rates for year to year trends because of the new match source. In general, the rates in this report of pre-college enrollments for students enrolling in college within one year of their high school graduation are higher, but similar to earlier reports. To review previous SBCTC Pre-College Reports see:

http://www.sbctc.ctc.edu/college/d_deveducation.aspx.

Key Pre-College Findings for Students for Recent High School Graduates in 2008-09 and Enrolled in Community and Technical College in 2009-10

- 20,336 high school graduates from the class of 2008-09 matched to community and technical college enrollments within one year of their graduation in 2009-10. 11,623 of these students (57 percent) enrolled in at least one pre-college course in 2009-10.
- Math is the greatest area of need. Fifty-one (51) percent enrolled in a pre-college math class. Twenty (20) percent enrolled in a writing class. After math, 20 percent enrolled in writing classes. Another 11 percent enrolled in a reading or coordinated reading and writing class.
- Students of color, apart from Asians, were more likely than white students to be enrolled in pre-college classes. Hispanics were substantially more likely than all other students to be enrolled.
- The overall need for pre-college instruction goes beyond new high graduates. It is fact distributed among students in all age groups. In 2009-10, 75,043 students enrolled in state-supported pre-college math and English classes. The median age for all students enrolled in pre-college was 22.6 years. Three (3) percent of students did not report their age. Forty-seven (47) percent (35,516 students) of the total state support headcount were under 22 years. Fifty-three (53) percent were older students. Twelve (12) percent (9,209 students) were 22-24 years old. The remaining 40 percent (30,338 students) were 25 years or older.
- Younger students were more likely to attend for transfer purposes. Older students are more likely to be enrolled for workforce goals.
- All students enrolled in state-supported pre-college math and English courses amounted to 14,451 full-time equivalents (FTES). Students graduating from high school within the past three years (both new and continuing college students) accounted for 4,614 state-supported FTES or about one-third (32 percent) of the total. In addition to student tuition, colleges spent on average \$4,543 per state-supported FTE for pre-college courses.
- Pre-college courses also cost the students their time and money. They pay for tuition and books, but these non-college-level credits do not count towards a degree. Colleges and the system as a whole are engaged in significant efforts redesigning pre-college programs to accelerate student progress (and thus minimize its costs) while maintaining quality and academic standards.

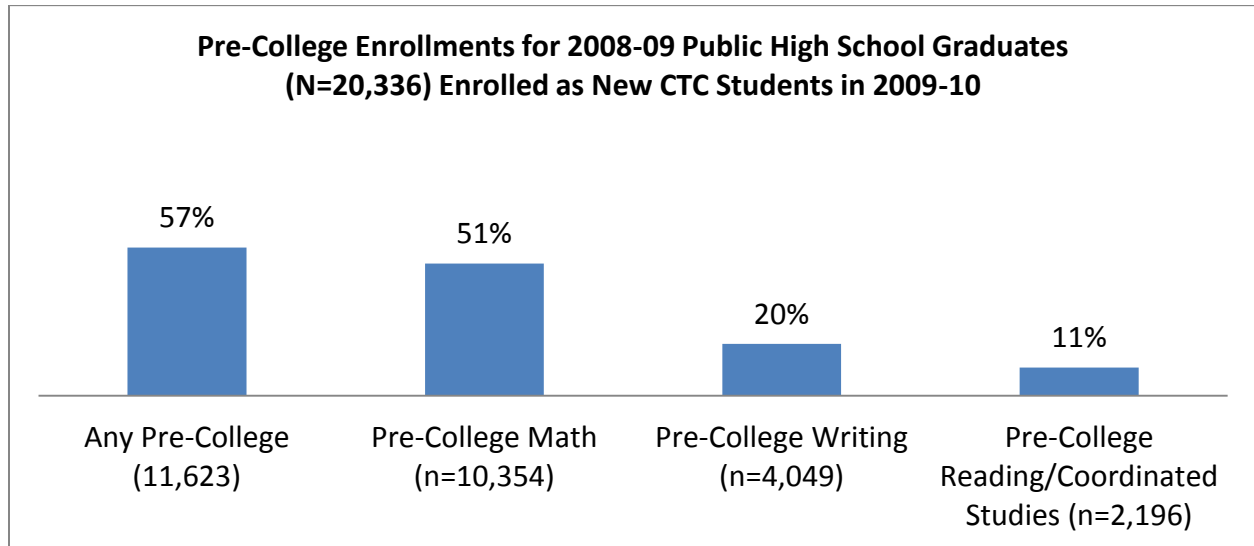
Pre-College Enrollments for 2008-09 Public High School Graduates Who Enrolled in Community and Technical Colleges in 2009-10

20,336 students graduated from high school in 2008-09 were matched to community and technical college system enrollments in 2009-10.

Fifty-seven (57) percent of these new, first-time college students enrolled in at least one pre-college course in 2009-10. Math was the greatest area of need. Fifty-one (51) percent enrolled in a pre-college math class. Twenty (20) percent enrolled in a writing class. Another 11 percent enrolled in a reading or coordinated reading and writing class.

Given the new matching methodology using the ERDC, rates in this report cannot be directly compared to previous reports to analyze trends. In general, these pre-college rates are higher, but comparable to previously reported rates.

The chart below shows pre-college rates for the 2009 public high school graduates who enrolled in community and technical colleges in 2009-10.

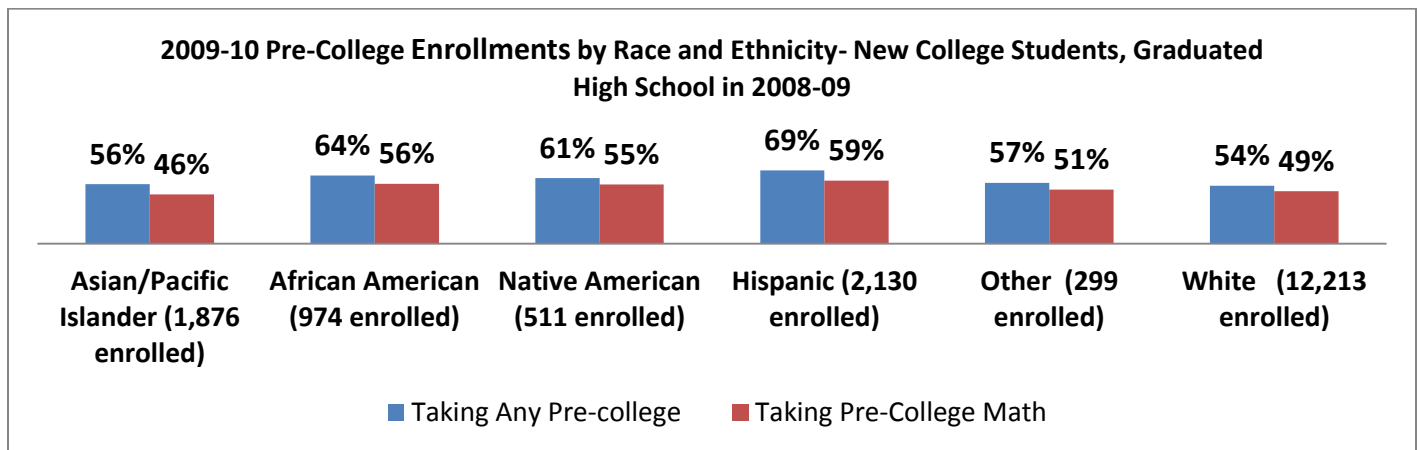


Note: In the graph above, “Any Pre-College Course” is unduplicated. A person can be in math, English, and writing.

2009-10 Pre-College Course Taking Pattern by Race/Ethnicity and Gender for Public High Schools 2008-09 Graduating Class

Sixty (60) percent of females and 55 percent of males enrolled in at least one pre-college math or English class in 2009-10. This difference is partially due to student goals. Females are more likely to enter for academic transfer and professional/technical programs like nursing that require college math.

Hispanic, African American and Native American student are substantially more likely than white and other students to enroll in pre-college courses.



College-to-College Variation: Fifty-seven (57) percent of 2008-09 high school graduates enrolled at the community and technical colleges took one or more pre-college courses in their first year of attendance. The rate of pre-college course taking at community colleges ranges from a low of 7 percent at Renton Technical College to a high of 77 percent at Big Bend Community College. One reason the rates generally may be lower in technical colleges is that some of their programs have integrated math and English skills into technical course curricula rather than having separate math and English courses. As part of overall reform efforts, colleges are trying different integrated instructional models (see last section of report).

**2008-09 Public High School Graduates
Attending College and Enrolled in Pre-College Courses in 2009-10**

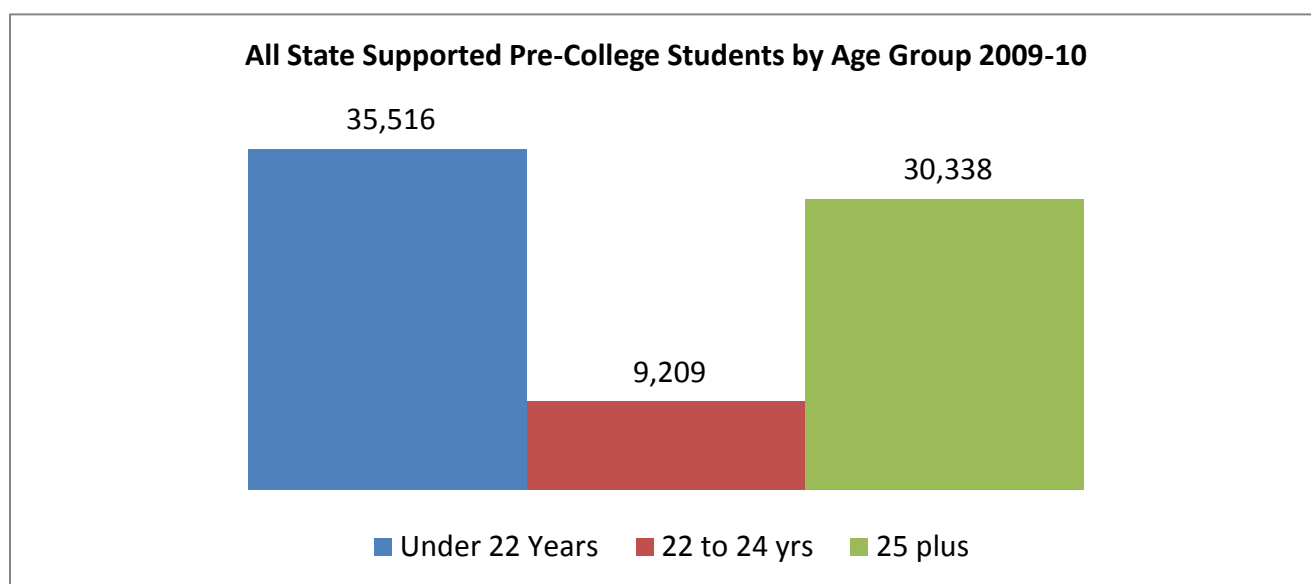
College	Public and Private High School Graduates Enrolled	Taking at Least 1	% in	Taking Pre-College Math	% Taking Pre-College Math
		Pre-College Course	Pre-College Courses		
Bates	64	32	50%	28	44%
Bellevue	1681	776	46%	570	34%
Bellingham	145	36	25%	36	25%
Big Bend	337	263	78%	242	72%
Cascadia	503	280	56%	276	55%
Centralia	423	250	59%	224	53%
Clark	1577	927	59%	853	54%
Clover Park	197	119	60%	105	53%
Columbia Basin	1047	716	68%	654	62%
Edmonds	843	498	59%	483	57%
Everett	1065	621	58%	511	48%
Grays Harbor	258	181	70%	158	61%
Green River	1074	557	52%	544	51%
Highline	788	345	44%	318	40%
Lake Washington	207	109	53%	105	51%
Lower Columbia	379	255	67%	248	65%
Olympic	844	487	58%	436	52%
Peninsula	197	122	62%	116	59%
Pierce Fort Steilacoom	714	262	37%	199	28%
Pierce Puyallup	672	312	46%	249	37%
Renton	161	9	6%	7	4%
Seattle Central	452	202	45%	189	42%
Seattle North	239	96	40%	82	34%
Seattle South	289	160	55%	138	48%
Shoreline	595	303	51%	290	49%
Skagit Valley	667	400	60%	363	54%
South Puget Sound	739	443	60%	411	56%
Spokane	708	391	55%	346	49%
Spokane Falls	1433	759	53%	661	46%
Tacoma	710	509	72%	424	60%
Walla Walla	306	170	56%	162	53%
Wenatchee Valley	486	308	63%	272	56%
Whatcom	659	402	61%	389	59%
Yakima Valley	695	449	65%	349	50%
System Total*	20,336	11,623	57%	10,354	51%

*System total is unduplicated

All Students (Headcount) Enrolled in State-Supported Pre-College Classes by Student Age and Purpose for Attending

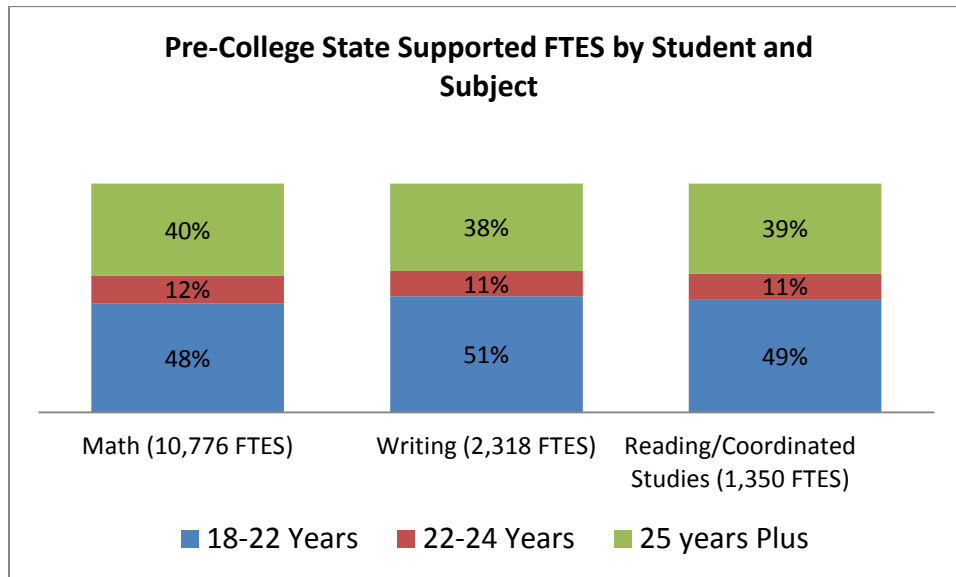
In 2009-10, 75,043 students enrolled in state-supported pre-college math and English classes. The median age for all students enrolled in pre-college was 22.6 years. Three (3) percent of students did not report their age. Forty-seven (47) percent (35,516 students) of the total state support headcount were under 22 years. Fifty-three (53) percent were older students. Twelve (12) percent (9,209 students) were 22-24 years old. The remaining 40 percent (30,338 students) were 25 years or older.

Younger students were more likely to attend for transfer purposes. Older students are more likely to be enrolled in professional technical programs leading to degrees.



State-supported Pre-College Course Taking – All Students

All students enrolled in state-supported pre-college math and English courses amounted to 14,451 full-time equivalents (FTES). One FTE equals 45 credits. Young students (18-22 years) accounted for about just under one half (48%) of all state-supported FTES, or 6,892 FTES. Older young students (22 years plus) accounted for 7,461 FTES or 52 percent. Students 22-24 enrolled for 1,708 FTES or 12 percent. Finally, students 25 or older enrolled for 5,753 FTES or 40 percent. The remaining FTES were enrolled for students with age not reported (less than 1 percent).



State Expenditures Related to Pre-College Course Taking: In 2009-10, in addition to student tuition, colleges spent on average \$4,543 per state-supported FTE for pre-college courses. Thus, the state expenditure in pre-college courses for all students attending within 3 years after graduating high school in 2008-09 was \$20.96 million (4,614 FTES @ \$4,543 per FTE). The cost for all pre-college course work was \$65.7 million. The funding for these expenditures comes from the state general fund in addition to the same tuition per credit paid by students that they pay for college-level courses. Students also spend money on textbooks for these courses.

Rethinking and Redesigning Pre-College Instruction

Pre-college course taking extends the time and cost of college. All degrees and long certificates require college math and writing. While students pay tuition for pre-college courses, credits for these courses do not count towards degrees. Efforts to reduce the need for pre-college courses have been directed all along the student pipeline. They focus on:

- Information and clearer expectations for high school students before they enroll;
- Ways to assess, place and diagnose needs for pre-college work;
- Integrating pre-college into college pathways;
- Services and supports for pre-college students;

- Reliance on data and evidence in moving forward with all of the strategies listed above.

The Transition Math Project (TMP) was one of the first efforts to rethink how to improve college readiness for high school students. Current College Readiness Standards are above the statewide minimum math credit requirements for high school graduation in Washington State. Providing greater clarity about expectations to teachers, students, and parents can address the long-term goals of TMP to increase students’ math course taking in high school and reduce the level of pre-college course taking. Funded for three years (2006-2009), TMP made headway on these issues by defining college readiness standards, promoting the idea of early assessment for high school students to encourage them to continue taking math, and building some local college/school district partnerships. TMP opened the door to communication and collaboration between high school teachers and college (two and four-year) math faculty in a way that had not previously taken place.

Building on the TMP work and process, the Higher Education Coordinating Board sponsored a project focused on college readiness “definitions” in science and English (reading and writing). Like TMP, this project has involved K-12 teachers along with college and university faculty (both two and four-year) in developing and pilot-testing the readiness definitions.

While these college readiness projects have focused largely on providing clearer expectations and working with high schools to help students meet those expectations, in the last few years the community and technical colleges in Washington have engaged in a range of significant projects focused on addressing issues related to their own pre-college programs:

- **Achieving the Dream:** This is a national project, funded by College Spark Foundation in Washington State. It is currently in its second phase engaging nine new two-year colleges, in addition to the original six from phase one, in Washington State by providing supports to colleges in collecting and analyzing student data; designing, implementing, and evaluating intervention strategies; and building strategies that can be brought to scale in a college and across the system.
- **Major-Related Program (MRP) Pathways:** Colleges are also rethinking math requirements in relationship to college-level math sequences. These college-level sequences vary depending upon the major as illustrated in the examples below.

College plans	Transfer to Business Major	Transfer to Elementary Education Major	Transfer to Engineering	Transfer to Nursing
1 st year math	Finite math, Calculus for Business, Statistics	2-3 course math series designed for educators	Pre-calculus and calculus	Statistics

- However, pre-college math, to some extent has been a one size fits all approach, culminating in an intermediate algebra course designed for students who need calculus, but taken by all students as a gateway to any college-level math course. Colleges are now redesigning how they configure and sequence these courses, in order to: a) provide more meaningful pre-college pathways for students (like the Carnegie Foundation’s *Statway Project*, which in Washington State involves Tacoma Community College and Seattle Central Community College); and b) offer students accelerated

opportunities to get to and through rigorous college-level coursework. In addition to *Statway*, colleges are also exploring and learning from other national reform efforts such as Carnegie's Strengthening Pre-Collegiate Education in Community Colleges (SPECC) and the course redesign work by the National Center for Academic Transformation (NCAT).

- In a closely related project, the Bill and Melinda Gates Foundation is supporting a coalition of Washington community and technical colleges collaborating to implement substantive changes in two areas. The *Rethinking Pre-college Math* project, built on the successful foundation of TMP, focuses on pre-college math innovations from a program or department-wide perspective, not just from individual faculty members by looking at core educational practices in developmental math. The *I-BEST for Developmental Education* project is working to expand the success of the original Integrated for Basic Education and Skills Training (I-BEST) model further into college-level work by developing new models to integrate pre-college math and English into professional-technical programs at ten colleges.
- Building on this ongoing work, the Articulation and Transfer Council is leading a system-wide task force to recommend systemic changes in pre-college education in community and technical colleges. The task force is comprised of members from the Instruction Commission, Articulation and Transfer Council, Workforce Education Council, Council for Basic Skills, Student Services Commission and councils, faculty, and Institutional Researchers Commission. Research, data and evidence will inform the future of pre-college education in Washington. Three major goals of this task force include:
 - Identifying key challenges and barriers impacting the transition of students from pre-college education to college-level courses.
 - Incorporate practices from these foundation efforts in Washington and other national and state best practices related to increasing the rate and number of students who transition from pre-college education to college-level courses.
 - Implementing best practices at scale across the system to increase the rate and number of students who transition from pre-college education to college-level courses.

As a particularly significant element of this statewide effort, one work group is reviewing a variety of approaches and options for an assessment and placement system, given recent research suggesting that prior classroom performance may be as good as or better than rigid cut scores for placement for new high school graduates. Diagnostic assessments may also be important so that instruction can be targeted exactly to what the student needs, particularly for older students who are focused on workforce programs that may require a discrete and defined set of skills.

For more on these efforts go to:

<http://www.sbctc.edu/college/e-assesscollegereadiness.aspx>;

http://www.sbctc.ctc.edu/college/e_studentcompletioninitiative.aspx;

http://www.sbctc.ctc.edu/college/e_achievingthedream.aspx.