

Role of Pre-College (Developmental and Remedial) Education 2009-10 Public High School Graduates Who Enroll in Washington Community and Technical Colleges in 2010-11

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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 2009-10 and enrolled in community and technical college in 2010-11.

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 2010-11. 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 and Data Center (ERDC), who provided the student data match to identify 2009-10 high school graduates. A student is included as a high school graduate in this report if he/she is reported in the Office of Superintendent of Public Instruction's (OSPI) academic year enrollment summary file with student enrollment status indicating "graduated with regular high school diploma" and was subsequently enrolled in a community or technical college anytime in 2010-11. The report focuses on students attending for academic transfer or professional/technical studies. Students are excluded from the analysis if they enrolled exclusively for adult basic education or personal interest courses.

The findings in this report can only be compared to the 2011 report which was the first year that ERDC started to provide the data match. In general, the rates in both this report and the report for 2011 of pre-college enrollments are higher, but similar to earlier reports done prior to the ERDC match. To review last year's report and other earlier SBCTC Pre-College Reports see:

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

Key Pre-College Findings for High School Graduates in 2009-10 and Enrolled in Community and Technical College in 2010-11

- 20,575 high school graduates from the class of 2009-10 matched to community and technical college enrollments in 2010-11. Fifty-seven (57) percent (11,633) of these students enrolled in at least one pre-college course in 2010-11.
- Math is the greatest area of need. Fifty-one (51) percent enrolled in a pre-college math class. Nineteen (19) percent enrolled in writing classes. Eleven (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 and African Americans were substantially more likely than all other students to be enrolled in these classes.

Key Pre-College Findings for All State Supported Students in 2010-11

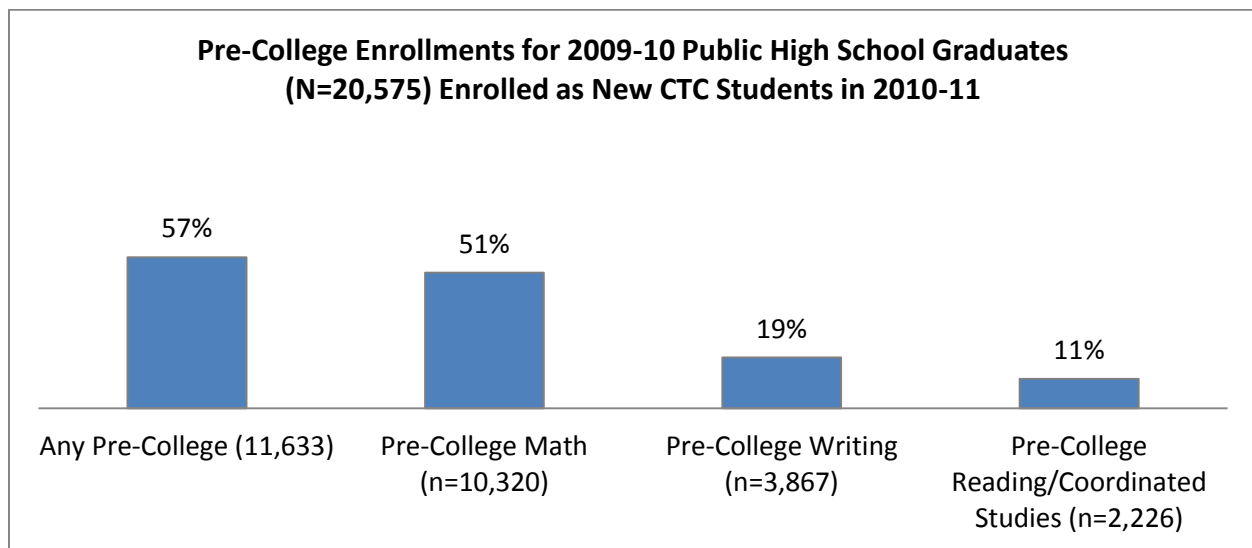
- In 2010-11, 77,133 students enrolled in state-supported pre-college math and English classes. The median age for all students enrolled in pre-college was 23 years. Forty-five (45) percent (34,473 students) of the total state support headcount were under 22 years. Fifty-five (55) percent were students enrolling more than 3 years after graduating high school. Of these older students, thirteen (13) percent (9,994 students) were 22-24 years old. The remaining 42 percent (32,396 students) were 25 years or older.
- Younger students (18-21) were more likely to attend for transfer purposes. Older students were more likely to be enrolled for workforce goals.
- All students enrolled in state-supported pre-college math and English courses amounted to 15,019 full-time equivalents (FTES). One FTE equals 45 credits. Young students (18-21 years), more recently graduated from high school, accounted for 45 percent of all state-supported pre-college FTES, or 6,827 FTES.
- Pre-college courses cost students their time and money. They pay for tuition and books, but these non-college-level credits do not count towards a degree. The community and technical college system is engaged in significant efforts to redesign pre-college programs to accelerate student progress, minimizing cost, while maintaining quality and academic standards.

Pre-College Enrollments for 2009-10 Public High School Graduates Who Enrolled in Community and Technical Colleges in 2010-11

Twenty thousand five hundred seventy-five (20,575) students graduated from high school in 2009-10 and were matched to community and technical college system enrollments in 2010-11.

Fifty-seven (57) percent of these new, first-time college students enrolled in at least one pre-college course in 2010-11. These students were most likely to enroll in math. Fifty-one (51) percent enrolled in a pre-college math class. Nineteen (19) percent enrolled in a writing class. Another 11 percent enrolled in a reading or coordinated reading and writing class.

The chart below shows pre-college rates for the 2010 public high school graduates who enrolled in community or technical colleges in 2010-11.

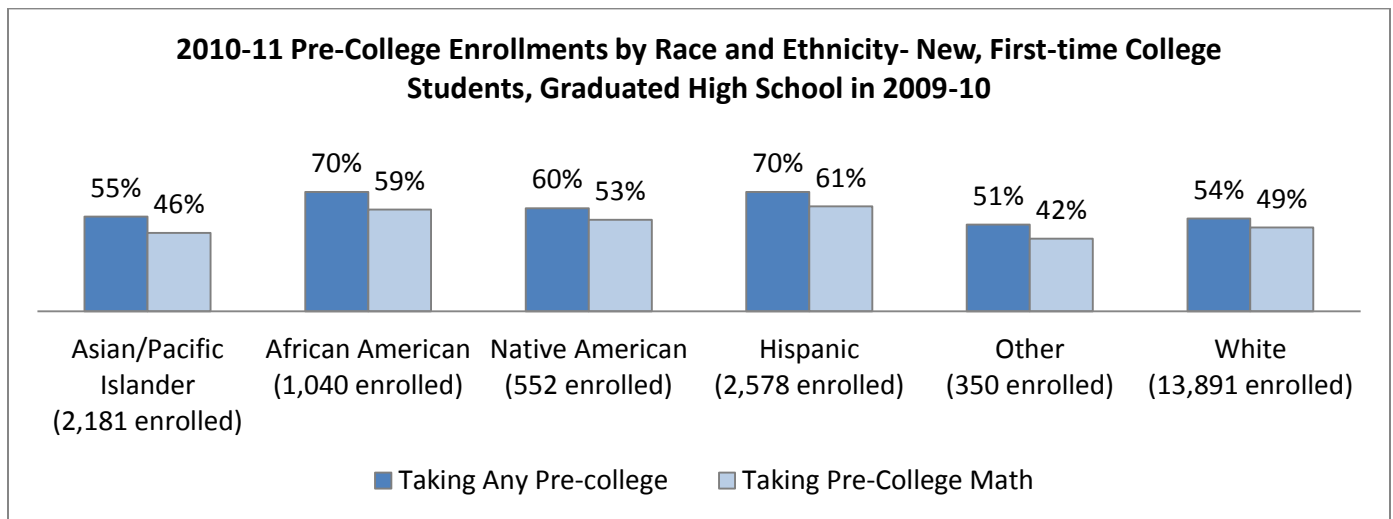


Note: In the graph above, "Any Pre-College Course" is unduplicated. A person can be in math, English, and writing.

2010-11 Pre-College Course Taking Pattern by Race/Ethnicity and Gender for Public High Schools 2009-10 Graduating Class

Fifty-nine (59) percent of females and 54 percent of males enrolled in at least one pre-college math or English class in 2010-11. This difference is partially due to student goals. Females are more likely to enroll for academic transfer and professional/technical programs like nursing that require college-level math.

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



College-to-College Variation: Fifty-seven (57) percent of 2009-10 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 3 percent at Renton Technical College to a high of 76 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).

**2009-10 Public High School Graduates
Attending College and Enrolled in Pre-College Courses in 2010-11**

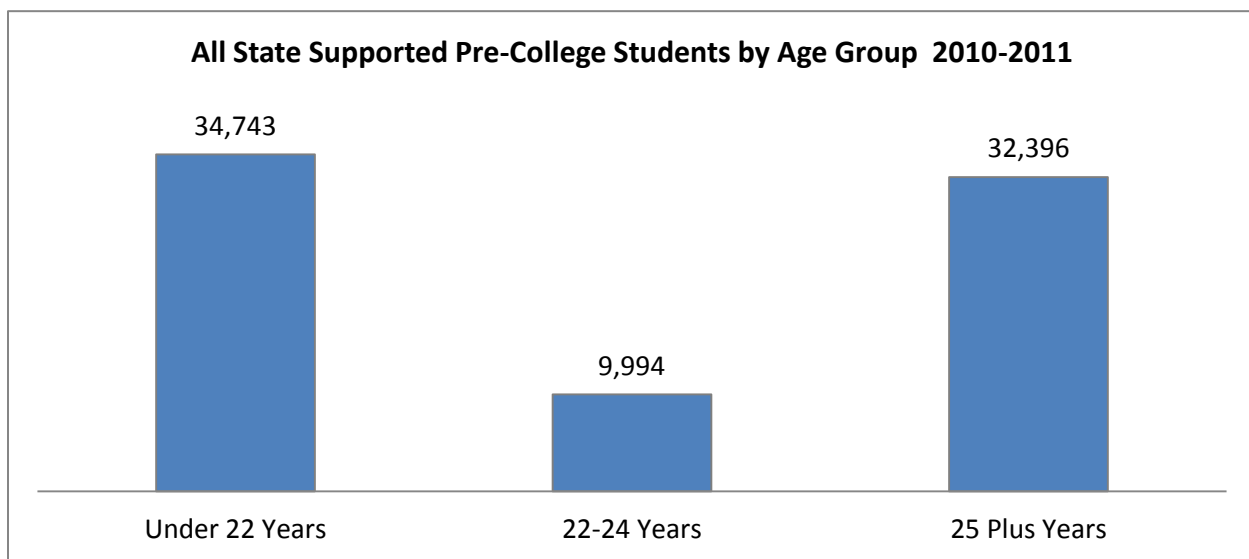
College	Public and Private High School Graduates Enrolled	Taking at Least One Pre-College Course	% in At Least One Course	Taking Pre-College Math	% Taking Pre-College Math
Bates	84	39	46%	29	35%
Bellevue	1600	750	47%	570	36%
Bellingham	141	46	33%	38	27%
Big Bend	356	271	76%	253	71%
Cascadia	511	267	52%	267	52%
Centralia	440	234	53%	211	48%
Clark	1,576	912	58%	832	53%
Clover Park	166	98	59%	84	51%
Columbia Basin	1,059	716	68%	642	61%
Edmonds	824	534	65%	506	61%
Everett	1,042	575	55%	482	46%
Grays Harbor	259	185	71%	163	63%
Green River	1,115	588	53%	551	49%
Highline	819	394	48%	360	44%
Lake Washington	142	76	54%	72	51%
Lower Columbia	435	289	66%	272	63%
Olympic	909	512	56%	465	51%
Peninsula	218	147	67%	139	64%
Pierce Fort Steilacoom	372	212	57%	160	43%
Pierce Puyallup	601	280	47%	230	38%
Renton	124	4	3%	4	3%
Seattle Central	445	201	45%	186	42%
Seattle North	209	81	39%	63	30%
Seattle South	273	139	51%	122	45%
Shoreline	543	283	52%	257	47%
Skagit Valley	661	415	63%	378	57%
South Puget Sound	727	420	58%	382	53%
Spokane	618	339	55%	300	49%
Spokane Falls	1,357	681	50%	595	44%
Tacoma	723	519	72%	418	58%
Walla Walla	293	162	55%	144	49%
Wenatchee Valley	558	374	67%	317	57%
Whatcom	629	383	61%	368	59%
Yakima Valley	752	509	68%	462	61%
System Total*	20,575	11,633	57%	10,320	51%

*System total is unduplicated

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

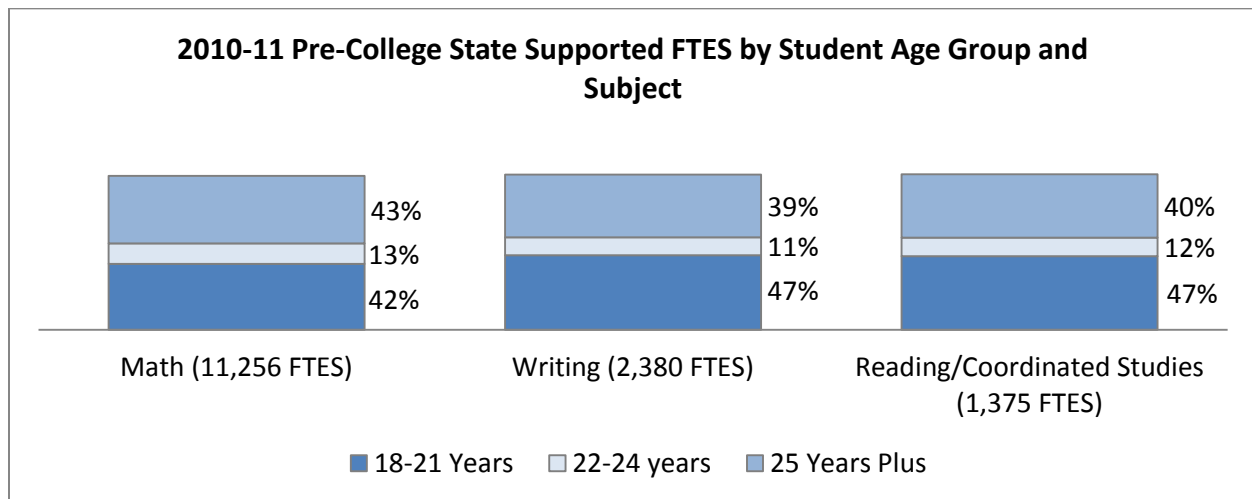
In 2010-11, 77,133 students enrolled in state-supported pre-college math and English classes. The median age for all students enrolled in pre-college was 23 years. Forty-five (45) percent (34,473 students) of the total state-supported headcount were under 22 years. Fifty-five (55) percent were students enrolling more than 3 years after graduating high school. Of these older students, thirteen (13) percent (9,994 students) were 22-24 years old. The remaining 42 percent (32,396 students) were 25 years or older.

Younger students were more likely to attend for transfer purposes. Older students were 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 15,019 FTES. Young students (18-21 years) accounted for 45 percent of all state-supported FTES, or 6,827 FTES. Older students (22 years plus) accounted for 8,184 FTES or 55 percent. Of these students, 22-24 year olds enrolled for 1,886 FTES (13 percent) and students 25 or older enrolled for 5,753 FTES (40 percent).



State Expenditures Related to Pre-College Course Taking: In 2010-11, total pre-college expenditure per full-time student averaged \$4,590 (combines state and tuition). Thus, the state expenditure in pre-college courses for all students attending within 3 years after graduating high school (18-21 years old) was \$21.76 million (6,827 FTES @ \$3,187 per FTE state expenditure). The funding for these expenditures comes from the state general fund. In addition students pay the same tuition per credit that they pay for college-level courses. Students are further impacted by the money they spend 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;
- Better ways to assess, place and diagnose needs for pre-college work;
- Integrating pre-college into college-level pathways;
- Services and supports for pre-college students;
- Reliance on data and evidence in moving forward with practices that support 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. The resulting College Readiness Standards are above the statewide minimum math credit requirements needed 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, reducing the number of students taking pre-college courses. 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 nine 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 Researcher and Planning Commission. Research, data and evidence will inform the future of pre-college education in Washington. Two 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.
 - Incorporating 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.

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 an indicator than rigid cut scores from standardized placement tests for placement of 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.

- In fall 2011 Washington was one of 10 states awarded a three-year grant aimed at improving student college readiness and increase rates of enrollment and graduation, using the Common Core State Standards (CCSS) and assessments to clarify a statewide common definition of college readiness signaling a student's preparedness for credit-bearing college courses. Funding for Core to College is provided by the Lumina Foundation, the William and Flora Hewlett Foundation, and the Bill & Melinda Gates Foundation. A steering committee led by the State Board for Community and Technical Colleges, with staff representation from The Office of the Superintendent of Public Instruction, Washington Student Achievement Council, and the Council of Presidents, are collaborating to implement the project. Project outcomes include:

- Increase understanding and acceptance of CCSS across Washington higher education institutions, particularly in math and English departments.
- Develop statewide agreement on the use of the CCSS in defining Washington college-readiness standards and the role of the SMARTER Balanced (SB) assessment instrument in assessing that readiness.
- Support local high school/college partnerships focused on using the CCSS and SB assessment to improve articulation between the sectors through collaborating around placement approaches and senior-year preparation for college.

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.