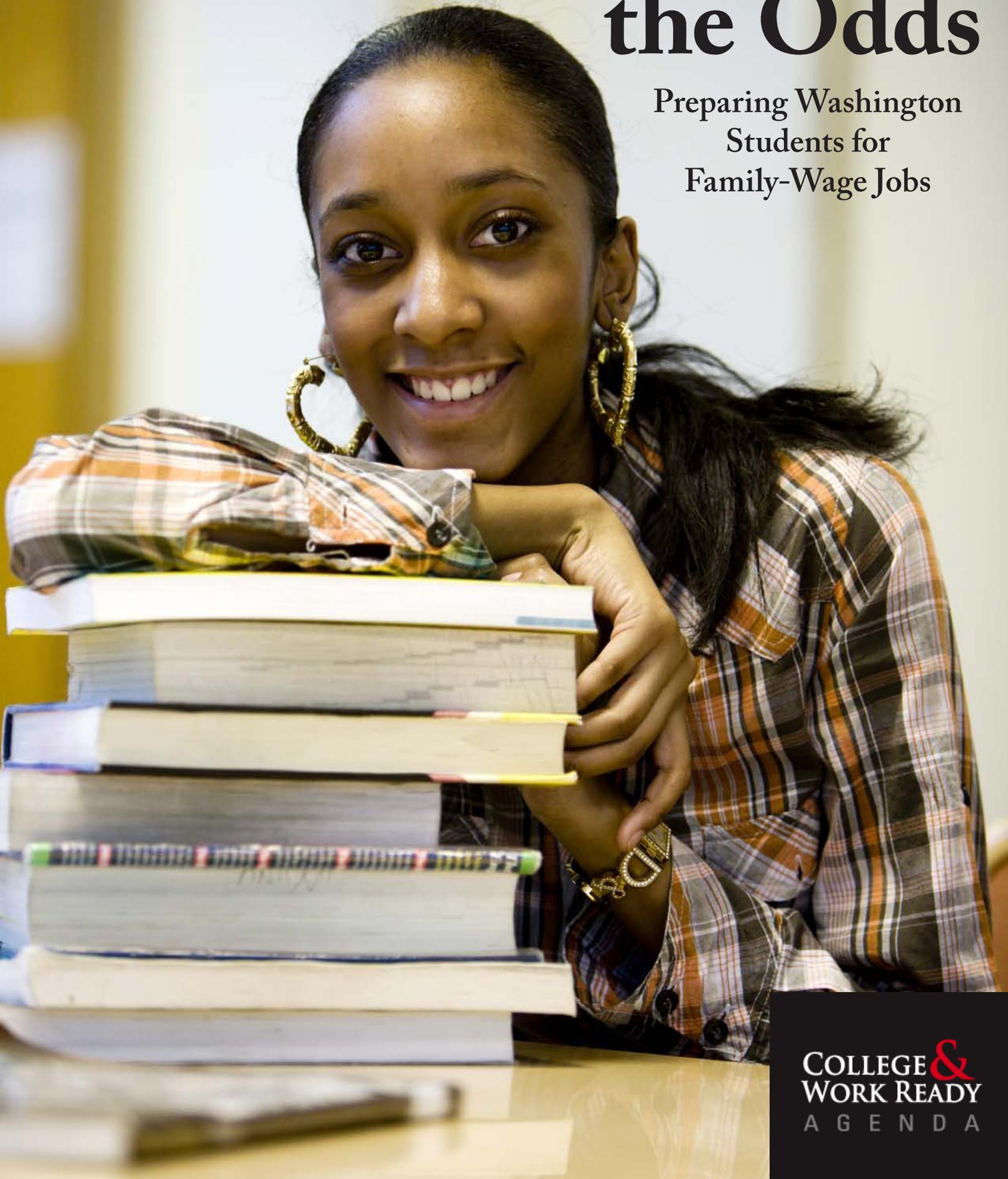


Improving the Odds

Preparing Washington
Students for
Family-Wage Jobs



EXECUTIVE SUMMARY

Who decides whether a student is headed for family-wage work or something less?

Education is the key to a high quality of life, economic vitality and individual prosperity. Washington's K-12 public education system should provide all students with the opportunity to succeed in postsecondary education, the 21st century world of work and citizenship.

Unfortunately, there is currently a dramatic disconnect between our state's high school diploma and the skills needed to enter and succeed at a job certification program, a two-year community or technical college, or four-year college.

- **By 2014, 77 percent of new job openings in Washington State** that pay enough for an individual to support a small family **will be held by workers who have had education or training beyond high school.** Of these jobs, **more than half will be held by workers with four-year college degrees.** These family-wage jobs are important because they provide enough income for a family to meet basic needs without government assistance.
- **Today, 76 percent of Washington's high school graduates enter a two- or four-year college** within two years of high school graduation.
- Yet, **more than half** of the students that go straight into a two-year college after high school **need remedial courses** before they are allowed to take credit-bearing classes. These students are also more prone to drop out of college.

A high school diploma is no longer sufficient to ensure a family-wage job. Employers increasingly expect post-secondary education or training. Simply put, "college" – in all the various forms it takes in today's world – is not just for the elite few.

Currently, the system practically guarantees that, even if students meet the minimum high school graduation requirements, they won't be adequately prepared for a two-year college—or eligible to even apply to a four-year college. This disparity in preparation disproportionately affects low-income students and students of color. In our rapidly changing, increasingly knowledge-based economy, the question is: **who decides whether a student is headed for family-wage work or something less?**

Washington's K-12 education system should prepare all students to compete for family-wage jobs. We must do everything in our power to improve the odds that students can pursue their dreams and successfully support themselves and their families.



WHAT IS A FAMILY WAGE IN WASHINGTON STATE?

For this report, researchers at the Washington State University Social and Economic Sciences Research Center (SESRC) calculated how much income is needed to support a family of three (including one adult worker and two children) or four (including two adult workers and two children).¹

Statewide, the minimum annual income required to support a family of three is just over \$46,000. The annual family-wage income for a family of four—if both adults work full-time—is just under \$53,000.

Statewide Family-Supporting Wages

Family of 3 (Assumes 1 worker, 2 children)	Family of 4 (Assumes 2 workers, 2 children)
\$46,372 per year \$22.29 per hour	\$52,966 per year \$12.73 per hour, per worker

The family-supporting wages used in this report are conservative estimates that reflect the *minimum* income level needed to pay for basic living expenses and not much else. These wage levels do not reflect a comfortable middle class lifestyle. For example, they do not include amenities that many take for granted such as a cell phone, Internet access or cable television. In fact, these income levels are just above what Washington’s Office of Financial Management defines as being in “economic distress.”²

Employers increasingly expect post-secondary education or training.

Workforce Development Areas By Region	Income 1 Working Adult with 1 Preschool-Age Child & 1 School-Age Child	Income 2 Working Adults with 2 School-Age Children
King and Snohomish Counties	Hourly: \$25.24 Annually: \$ 52,509	Hourly Per Worker: \$13.73 Annual Total: \$57,097
Pierce County	Hourly: \$23.04 Annually: \$ 47,916	Hourly Per Worker: \$13.64 Annual Total: \$56,745
NW and SW Workforce Development Areas	Hourly: \$21.48 Annually: \$44,676	Hourly Per Worker: \$12.52 Annual Total: \$52,075
Olympic and Pacific Mountain	Hourly: \$19.18 Annually: \$39,893	Hourly Per Worker: \$11.00 Annual Total: \$45,766
Spokane	Hourly: \$20.07 Annually: \$41,750	Hourly Per Worker: \$11.98 Annual Total: \$49,819
Eastern and North/Central WA	Hourly: \$18.20 Annually: \$37,846	Hourly Per Worker: \$11.19 Annual Total: \$46,563
Tri Cities and Yakima	Hourly: \$18.72 Annually: \$38,928	Hourly Per Worker: \$11.64 Annual Total: \$48,429
State Average	Hourly: \$22.29 Annually: \$46,372	Hourly Per Worker: \$12.73 Annual Total: \$52,966

WHAT JOBS WILL PAY A FAMILY WAGE?

Drawing on detailed workforce data from the state's Employment Security Department, SESRC analyzed projected job openings from 2004 to 2014. The list of occupations that pay at least a family-supporting wage and that are projected to have the greatest number of new openings each year varies from region to region. The following table uses Pierce County as an example, showing the top 10 occupations,

listed according to greatest number of new openings per year from 2004-2014, that will support a family of three. It also shows the percentage of workers currently in these jobs that have at least some post-high school education or training.

These figures are available for six different regions across the state at: www.collegeworkready.org.

A high school diploma is no longer sufficient to ensure a family-wage job.

Projected Family-Wage Jobs in Pierce County, 2004-2014 Top 10 Occupations with Greatest Number of Openings Due to Growth

Occupation	Employment in 2004	Projected Employment 2014	Growth Rate 2004-14	Average Annual New Openings due to Growth 2004-14	Mean Hourly Wage (2006 dollars)	Percentage of Workers With Some College or Bachelor's
Registered Nurses	8,980	10,968	22.1%	199	\$32.95	98.3%
First-Line Supervisors/Managers of Retail Sales Workers	6,359	7,910	24.4%	156	\$24.44	59.2%
First-Line Supervisors/Managers of Construction Trades and Extraction Workers	3,409	4,686	37.5%	128	\$35.45	34.8%
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	4,444	5,586	25.7%	114	\$29.69	76.5%
Electricians	3,030	4,142	36.7%	112	\$23.86	48.6%
Operating Engineers and Other Construction Equipment Operators	2,467	3,390	37.4%	92	\$29.15	22.5%
First-Line Supervisors/Managers of Office and Administrative Support Workers	4,464	5,378	20.5%	92	\$25.70	66.6%
Accountants and Auditors	3,621	4,480	23.7%	86	\$29.58	93.2%
Management Analysts	2,530	3,369	33.2%	84	\$30.30	92.4%
Aircraft Mechanics and Service Technicians	1,753	2,530	44.3%	78	\$24.48	66.6%

EDUCATION BEYOND HIGH SCHOOL IMPROVES THE ODDS

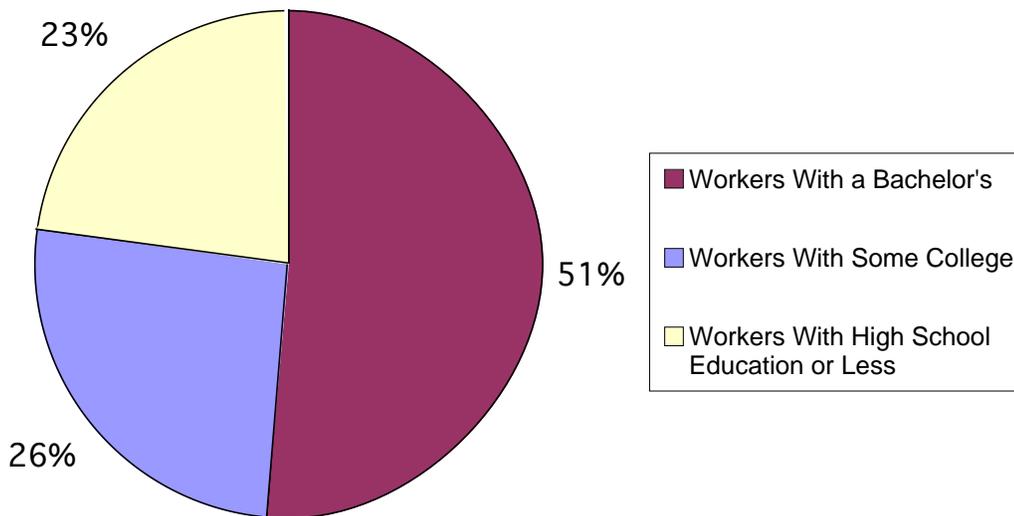
By 2014, statewide estimates indicate that 77 percent of single-earner, new family-wage jobs in Washington are likely to be held by individuals with at least some postsecondary education or training. This includes 51 percent of family-wage jobs held by individuals with a bachelor's degree and 26 percent of family-wage jobs held by individuals with some college.

In King and Snohomish Counties, this figure jumps to 85 percent, which means just 15 percent of all jobs paying sufficient wages to support a family of three will be held by workers with a high school diploma or less. Even in areas with the lowest proportion of family-supporting jobs held by workers with postsecondary education,

71 percent of jobs will still be held by individuals with some college or a bachelor's degree.

Households with two working adults can achieve a family-supporting income through occupations paying lower wages than a single-earner household, but even these workers will encounter a job market largely favoring postsecondary education and training. Assuming both adults work full-time, 63 percent of jobs that pay a family wage will be held by workers with more than a high school diploma. This means the majority of workers will need to have education or training beyond high school to compete for jobs that enable them to avoid living in poverty or "economic distress."

Education Levels of Workers in Projected Family-Wage Jobs



The majority of workers will need to have education or training beyond high school to compete for jobs.



WHAT “COLLEGE” MEANS IN TODAY’S SOCIETY

In the past, the term “college” conjured up images of ivy-covered campuses offering four-year liberal arts degrees to a small subset of students seeking office and professional careers. In today’s world, the concept of college is broader and applies to a much larger proportion of our students. College encompasses many forms

of education after high school, including certificate and credential programs, two-year degrees from community or technical colleges, rigorous apprenticeship programs and four-year degrees from baccalaureate institutions.

College is no longer for just the elite few.

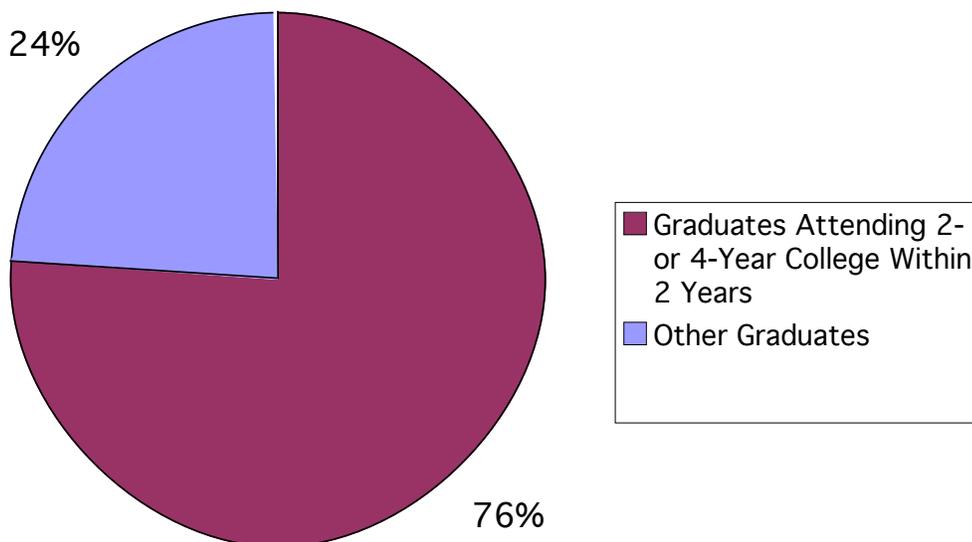
Washington’s K-12 public education system should provide all students with the opportunity to succeed in postsecondary education.

TODAY’S STUDENTS: COLLEGE-BOUND, BUT ARE THEY COLLEGE-READY?

The State Board for Community and Technical Colleges reports that 76 percent of Washington’s high school graduates enroll in some type of college within two years of graduation.³ Put another way, more than three-quarters of graduates presumably have made the connection between college and securing a family-wage job. That’s the good news. The bad news is that the majority are not adequately prepared to succeed once they get there.

It’s also important to note that, for many, a two-year college is a springboard to entry into a four-year baccalaureate institution. Seventy percent of high school students entering a two-year college do so with the goal of transferring to a four-year baccalaureate institution.⁴ Forty-one percent of all bachelor’s degrees awarded in Washington go to students who began their studies at a community or technical college.⁵

College-Going Rates of Washington State Graduates



COMMUNITY COLLEGES HAVE AN OPEN-DOOR ADMISSIONS POLICY BUT...

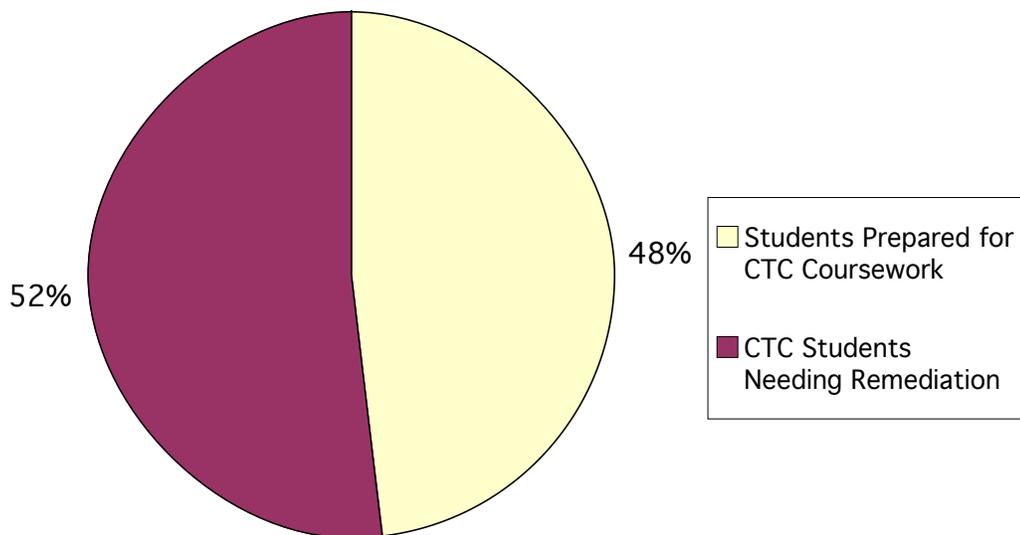
Washington's community and technical colleges are "open-door" institutions that do not have formal admissions requirements. But getting in the door is not the same as getting in the classroom.

Students who want to enroll in degree and certificate programs at a two-year or four-year college must first take placement tests in reading, writing and mathematics to determine if they are ready for college-level work. Students who do not meet the minimum standard to begin credit-bearing coursework are placed in pre-college, or remedial, courses. Pre-college courses cover content that should have been learned in high school. Students pay

regular tuition for these courses, yet they do not earn college credit, nor can they enroll in credit-bearing courses until they pass the remedial courses.

Too many Washington students who have just finished high school are placed in remedial courses. In 2005, 52 percent—more than 12,300—of students who graduated from high school and enrolled in community or technical college the following fall had to take pre-college courses to gain the skills they should have learned in high school. By far the largest problem is in mathematics, in which more than 10,800 first-time freshmen were not prepared to begin college-level coursework.⁶

2005 Remediation Rates at Community and Technical Colleges



Too many Washington students who have just finished high school are placed in remedial courses.

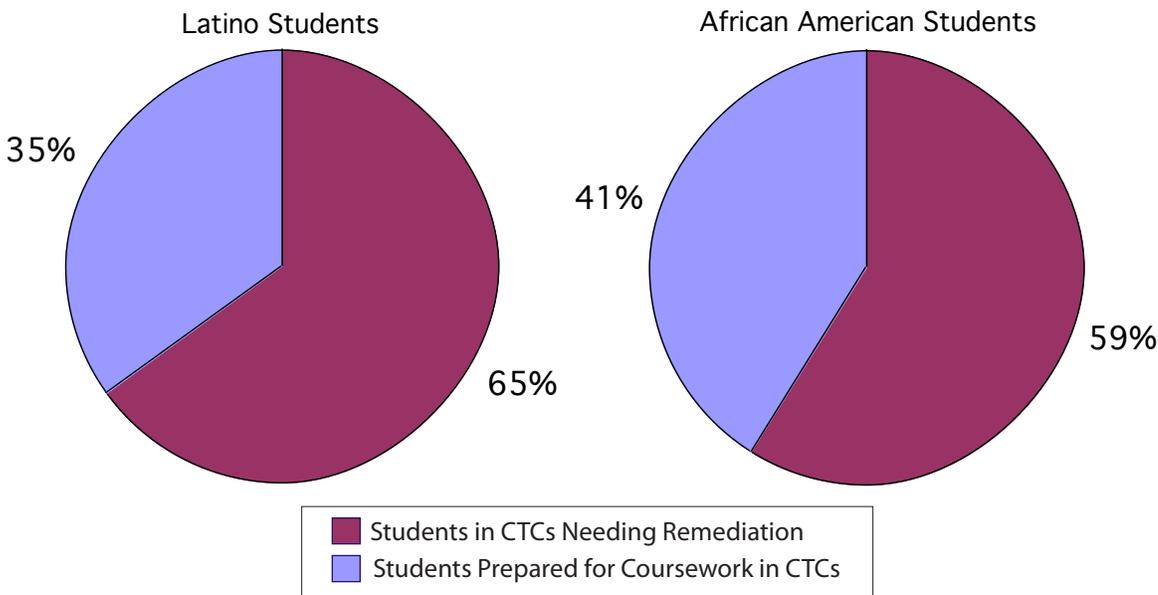


Remediation rates for students of color are especially high: In 2005, 59 percent of African American students and 65 percent of Latino students who graduated from high school and directly enrolled in community or technical college had to take at least one remedial course in the 2005-06 school year.⁷

Remediation is not just a problem for students in community and technical

colleges; several of Washington's baccalaureate institutions report a significant portion of their freshmen population need to take remedial coursework. In 2006, more than a quarter of Eastern Washington University freshmen and roughly 19 percent of students entering Central Washington University were required to take pre-college courses.⁸

Remediation Rates for 2005 Washington State High School Graduates Who Went Directly into a Community or Technical College



Nationally, only half of students who took one remedial class completed college.

REMEDIATION RATES: A HIGH COST TO THE SYSTEM AND TO OUR STUDENTS

The costs of remediation are high for both the system and students. In 2005-06, Washington State spent \$17.2 million on remediation to recent high school graduates in two-year community and technical colleges.⁹ This means that state taxpayers are footing the bill twice to teach college freshmen content that they should have learned in high school.

For students, remediation doesn't just cost money. It costs them opportunity.

National research shows students who took remedial classes were much less likely to obtain a college degree than students who were prepared for college when they entered. In fact, only half of students who took one remedial class completed college.¹⁰ The remediation and dropout rates in Washington's two-year colleges reflect that pattern, as well. In 2004, 13 percent of white students left a two-year college in Washington State without having completed a degree. More than twice as many African American students and Latino students left college without a degree.¹¹

TROUBLING MISMATCHES IN THE SYSTEM

The misalignment between Washington's *minimum* course credit requirements for high school graduation and the minimum level of preparation required to even be eligible to apply to a four-year baccalaureate institution is dramatic.

As illustrated by the chart below, the *only* diploma credit requirement that is presently aligned with minimum four-year college entrance requirements is in the visual or performing arts.

Who decides whether a student is headed for family-wage work or something less?

Minimum High School Graduation Requirements	Minimum Four-Year College Entry Requirements
3 Credits English	4 Credits English
2 Credits Math <i>(soon to be 3 credits, specificity to be determined by the State Board of Education)</i>	3 Credits Math <i>(Algebra II or higher, 1 credit in senior year)</i>
2 Credits Science (one lab)	2 Credits Science <i>(soon to be all lab, one credit algebra-based)</i>
2.5 Credits Social Studies	3 Credits Social Studies
0 Credit World Language	2 Credits World Language
1 Credit Visual or Performing Arts	1 Credit Visual or Performing Arts
2 Credits Health & Fitness	0 Credit Health and Fitness
1 Credit Occupational Education	0 Credit Occupational Education
5.5 Credits Electives	N/A

Black = Diploma requirements lower than four-year requirements

White = Aligned

Gray = Diploma requirements higher than four-year requirements

The Washington State Board of Education has taken encouraging steps to address the alignment issues between the K-12 graduation requirements and postsecondary expectations. However, sustained community, parent and business support will be required to successfully move this important agenda forward.



STUDENTS AREN'T TAKING ENOUGH RIGOROUS CLASSES

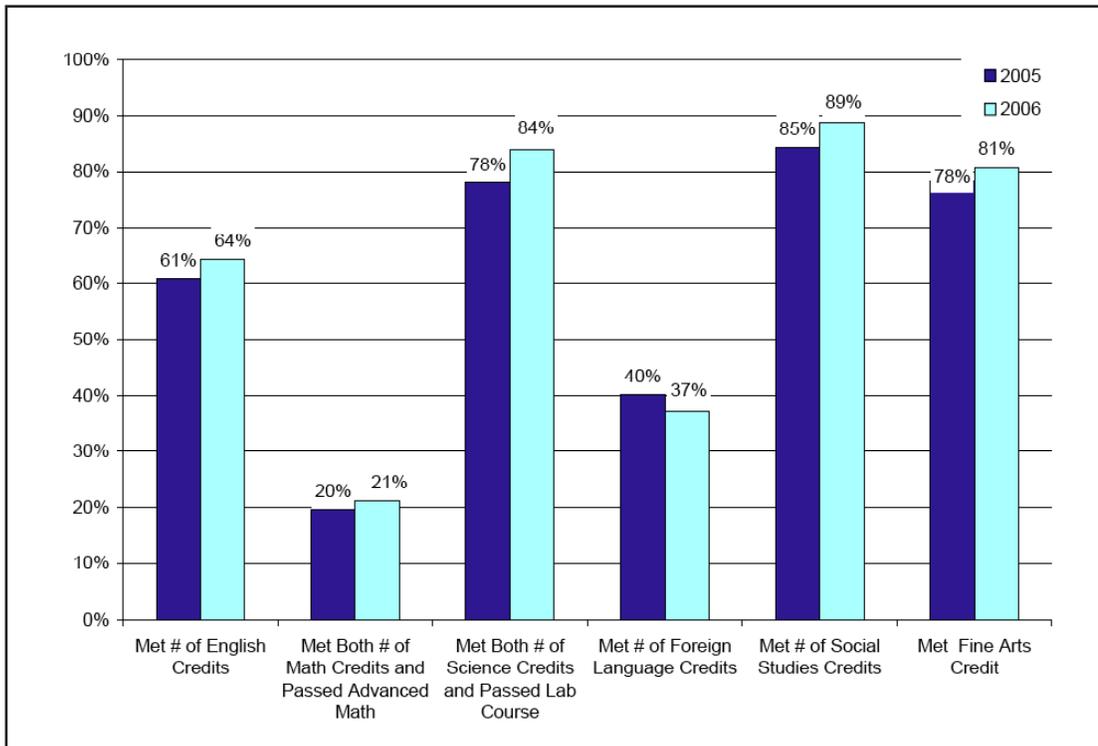
Research published this year by Fouts & Associates for the Bill & Melinda Gates Foundation reveals alarmingly low college preparation rates among Washington's students.¹²

The researchers analyzed thousands of transcripts for high school graduates in the classes of 2005 and 2006 in a statewide sample of 42 schools. They found that only 28 percent of Latino, 28 percent of Native American and 31 percent of African American students completed the courses needed to even be eligible to apply to Washington's public four-year colleges

or universities in the class of 2005. Just 42 percent of white students and 58 percent of Asian American students took the right courses.

Of the student transcripts studied by Fouts & Associates, lack of math courses was by far the biggest barrier to college for most students. Of the students in the class of 2006 who did not meet all course requirements for admissions into a four-year college, only 21 percent had the needed math credits. In contrast, 64 percent had the needed English credits.

Course Taking Patterns of Students NOT Meeting High School Course Requirements for Admission to a Washington Four-Year College



The system practically guarantees that, even if students meet the minimum high school graduation requirements, they won't be adequately prepared for a two-year college—or eligible to even apply to a four-year college.

MATH: WHY DOES IT MATTER?

In an increasingly technical, information-based society, math matters for all students. A significant portion of the jobs that will pay a family-wage – or higher – in Washington’s innovation-driven economy are in fields that require a rich background in math, as well as science, including biotechnology, health care, software development, aviation and environmental sciences.

These fields generally require a higher level of postsecondary education and more rigorous preparation at the high school level. Nearly one-quarter of projected job openings statewide through 2012 that require a bachelor’s degree will be in computer science, engineering and life sciences, combined.¹³ Salaries for these jobs are significantly higher than the minimum threshold we have identified as a “family-wage” income.

Higher levels of preparation are not solely for budding scientists and engineers. Many skilled trade occupations that provide a family-wage income also require a strong foundation in math and science. For instance, the Associated General Contractors of America recommends that students contemplating becoming pipe- and steam-fitters take algebra, geometry, trigonometry, general science, physics and mechanical drawing.¹⁴

But no matter what field a student decides to go into, higher-level mathematics help develop the ability to solve complicated real-world problems, analyze choices and construct logical arguments across a wide range of subjects and situations. These are skills that rank at the top of almost every Washington employer’s list of desired employee qualifications. They are also skills that are essential to functioning in our increasingly complex society.

Higher levels of preparation are not solely for budding scientists and engineers.

PREPARATION FOR FAMILY WAGE JOBS: WHO DECIDES?

Some will argue that our economy will always include low-wage, low-skill jobs that do not require a college education, many of which are necessary to keep our society functioning. While this is true, the critical question is: Who decides whether a student is headed for family-wage work or something less?

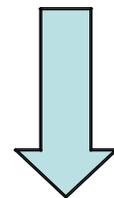
Most parents have high aspirations for their children. According to a 2007 survey, 80 percent of Washington voters polled believe the high school diploma should be directly aligned with minimum college application requirements.¹⁵ Eighty-two percent of African American parents surveyed in 2006 said that students would need at least two or four years of education

beyond high school to secure a family-wage job.¹⁶

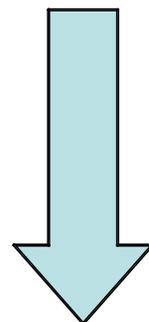
Unfortunately, these expectations and aspirations are not supported by our current K-12 education system. The system practically guarantees that, even if students meet the minimum requirements to obtain a high school diploma, they will not be prepared for coursework at a two-year college—or even eligible to apply to one of our public four-year institutions.

The course-taking gap leads to a college-going gap, which eventually leads to a gap in earning potential. These disparities disproportionately affect low-income students and students of color.

COURSE TAKING GAP



COLLEGE GOING GAP



FAMILY WAGE OPPORTUNITY GAP

CLOSING THE PREPARATION GAP

Washington’s public K-12 education system should equip all students with the knowledge and skills needed to compete for family-wage jobs. A high school diploma should indicate that students are prepared for post-high school education and training. And no student – regardless of race or income – should be denied the chance to apply to a four-year college if they choose to do so.

The College & Work Ready Agenda is committed to partnering with policymakers and education stakeholders to align the diploma credit requirements with what it takes to be prepared for college, work and citizenship. To this end, Washington’s minimum high school graduation requirements should include the following:

Aligning High School Graduation Requirements with Preparation for 21st Century Work and College
4 Credits English
3 Credits Math, <i>including Algebra II and 1 credit in senior Year (additional year of math is already planned)</i>
2 Credits Science <i>(two labs, one credit algebra-based)</i>
3 Credits Social Studies
1 Credit Visual or Performing Arts
2 Credits Health & Fitness
4 elective credits: students choose among CTE, world language and/or additional math, science and arts credits

The result: students who earn a high school diploma in Washington State will be ready to pursue a range of opportunities after high school, including coursework at a two-year community or technical college, and will have the option of applying to a four-year baccalaureate institution.

Setting expectations for anything less than readiness for beginning coursework in postsecondary education and training systematically decreases the odds that students will be able to compete successfully for family-wage work.



SOURCES AND METHODOLOGY

The authors are deeply indebted to David Pavelchek and his team at the Washington State University Social and Economic Sciences Research Center for their original research on family wages and job openings. The authors also relied on data provided by the Washington State Board for Community and Technical Colleges. Additional sources and a full description of the methodology can be found at www.collegeworkready.org. This report was prepared by Education First Consulting in collaboration with Partnership for Learning and the College & Work Ready Agenda.

- 1 The SESRC team used the living wage standard established in the Northwest Job Gap report and adjusted for regional differences using the Pearce-Brooks standard to determine minimum family-wage household budgets (in 2006 dollars) for six regions across Washington State. A full description of the methodology is available on the College and Work Ready Agenda website at www.collegeworkready.org.
- 2 Came, D. & Gardner, E. (January 2007). Comparing standards of economic distress.
- 3 Role of pre-college (developmental and remedial) education for recent high school graduates attending Washington community and technical colleges: system summary for students enrolled in 2005-06. (December 2006). *Washington State Board for Community and Technical Colleges*, Research report No. 06-5.
- 4 Ibid.
- 5 Preparing students to be on the transfer path in community and technical colleges. (December 2004). *Washington State Board for Community and Technical Colleges*, Research report No. 04-2.
- 6 Role of pre-college (developmental and remedial) education for recent high school graduates attending Washington community and technical colleges: system summary for students enrolled in 2005-06. (December 2006). *Washington State Board for Community and Technical Colleges*, Research report No. 06-5.
- 7 Seppanen, L. (October 26, 2007). Personal e-mail communication. *Washington State Board for Community and Technical Colleges*.
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- 9 Ibid.
- 10 Adelman, Clifford. *Answers in the Tool Box: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment*, Office of Educational Research and Improvement, U.S. Department of Education, June 1999.
- 11 Academic year report 2005-06. (December 2006). *Washington State Board for Community and Technical Colleges*.
- 12 Stroh, H.R., Fouts, J.T., & Gratama, C.A. (March 2007). Washington State high school graduates' college eligibility, college attendance and persistence rates: graduating classes of 2004 and 2005. *Fouts & Associates, L.L.C., prepared for the Bill & Melinda Gates Foundation*.
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- 16 Davis, Hibbitts & Midghall, Inc. (June 2006). Partnership for Learning African American & Latino surveys.

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