



Executive Summary

Education is a catalyst for prosperity, civic engagement, and healthy and vibrant communities. Recognizing education's importance, the 2014 Legislature adopted two statewide goals to increase educational attainment, that by 2023:

- All adults in Washington, ages 25-44, will have a high school diploma or equivalent.
- At least 70 percent of Washington adults, ages 25-44, will have a postsecondary credential.

Since their adoption, the goals have helped unify statewide and regional efforts to affect change and to ensure Washington's high school graduates and working-age adults have the chance to compete for the best jobs in Washington's growing economy.

For Washington's economic needs to be met, many more individuals will need to attain a postsecondary credential. We must expand current education opportunities and develop innovations to meet the educational attainment goals.

This report measures the state's progress toward improving educational attainment in Washington. Overall, the results are mixed and progress is slow. Even though postsecondary enrollments are down slightly from 2012, degree and certificate awards have increased five percent. There have been significant increases in the number of Hispanic/Latino students who are completing high school, as well as the number who are enrolling in and completing college; however, college completions lag for African American and Native American individuals.

There are still significant educational opportunity gaps for some racial and ethnic subgroups, for low-income students, and for others, such as foster youth and students with disabilities.

In the four years of the Roadmap timeline, Washington's attainment levels have grown only slightly.

- Just over 90.1 percent of Washington's population aged 25-44 holds a high school diploma or equivalent, a one percentage point increase over the baseline year of 2011.
- Among adults aged 25-44, attainment of a postsecondary certificate, apprenticeship, degree, or higher reached 52.5 percent, a two percent increase over the baseline year.

The key challenges we must address if we are to make significant progress toward meeting our attainment goals fall into four major categories:

- **Affordability:** increasing the state's commitment to affordable postsecondary education.
- **The opportunity gap:** targeting strategies to create equitable opportunities to gain high school and postsecondary credentials.
- **Reengaging adults:** connecting adults with postsecondary programs, and ensuring they complete a credential.
- **Regional challenges:** addressing the unique educational and economic challenges and opportunities of the state's varying regions.

While the overall results do not show enough progress, the goals and strategies of the Roadmap have the potential to catalyze major shifts. Strategies include:

- Building on strong accelerated learning options for smooth transitions and increased efficiency.
- Implementing innovations and new delivery designs to reengage adults.
- Providing career-connected learning and targeted student supports, in both K-12 and postsecondary education.
- Expanding financial aid and institutional funding to improve access and success.
- Engaging communities in all regions to energize local actions in support of increased educational attainment.

If we are to make significant progress toward meeting our attainment goals, we need to develop and expand innovative strategies. Such efforts foster opportunity, providing Washingtonians with avenues to prosperity. If we fail to meet the educational needs of our students, we risk creating large segments of the population defined by limitations. Innovative strategies, such as career-connected learning and the reengagement of working-age adults who have not achieved a postsecondary credential, can make a difference. With renewed energy and focus on connecting youth and adults to college and career opportunities, and expanding pathways for success, we can build an even more prosperous Washington.

Table of Contents

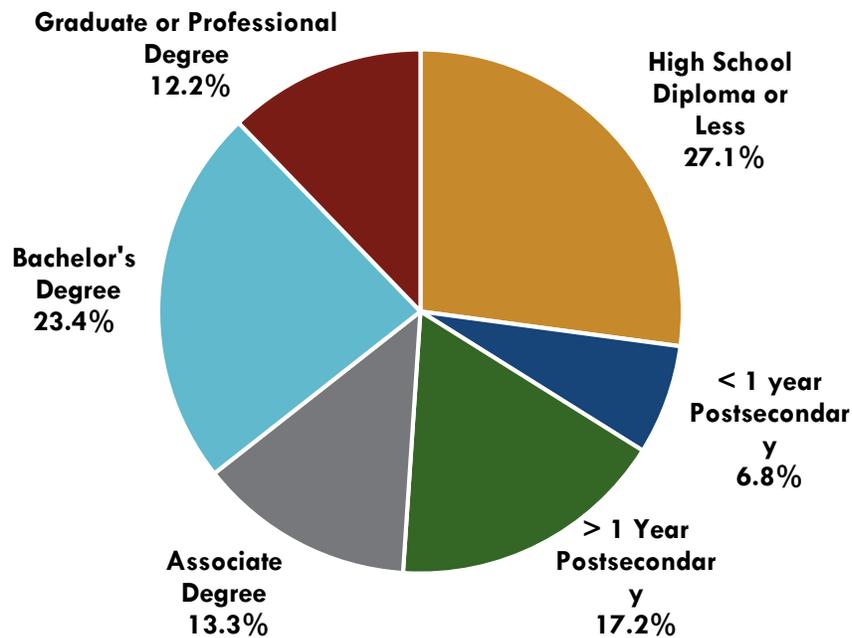
Executive Summary	1
Pivotal Point in Washington’s Roadmap to Prosperity	4
Washington’s skills gap	4
What kind of future will Washington build?	5
Statewide attainment goals set the course	5
Measuring Progress	7
Progress on Educational Attainment Goals.....	7
Progress on Postsecondary Affordability	7
Progress on High School Completion	9
Progress on Postsecondary Enrollments and Completions	9
Challenges	13
Affordability.....	13
The Opportunity Gap.....	13
Reengaging Adults	13
Regional Challenges	14

Pivotal Point in Washington’s Roadmap to Prosperity

Washington is at a pivotal point in economic expansion and prosperity. A high school diploma or equivalent is increasingly a minimum requirement to enter the workforce and train for advancement. And the vast majority of jobs in this state require a postsecondary credential (see Figure 1).

“The majority of job opportunities—particularly those that will support upward mobility and a good quality of life—will be filled with workers who have postsecondary education or training.”¹

Figure 1: Total Projected Job Openings by Education Level, 2020-2025



Source: WSAC Analysis of openings in 2017 Washington State Employment Security Department, Long-Term Employment Forecast and Education Levels based on analysis of the 2011-15 American Community Survey

Washington’s skills gap

Washington has a skills gap—a gap between the skills employers need and the skills job-seekers have. If the state can’t deliver a skilled workforce, employers will fill living-wage jobs by importing talent or relocating their business.² Washingtonians will be left behind.

Employers need a highly skilled workforce to remain competitive. A statewide employer group, the Washington Roundtable,

predicted 740,000 net job openings in Washington between 2016 and 2021, with state job growth at nearly three times the national average.³ Washington is not producing the number of credentials needed at every level, with the largest gaps among apprenticeships, certificates and associate degrees, and large gaps at the bachelor’s and graduate levels.

As a result, our residents are unable to compete for the best jobs. Too many businesses find they have to recruit out of state to find applicants with the

qualifications they need.^a Among all states, Washington ranks fourth for in-migration of workers at all training levels.⁴

Adding to the complexity are the diverse needs of our state by region. While some gaps are consistent throughout the state—particularly in education and healthcare—other gaps tend to be more focused in certain areas of the state. For example, some regions are facing important changes resulting from evolving industries, while others are struggling to keep up with population growth.⁵

What kind of future will Washington build?

To enjoy the benefits of a skilled and educated workforce, Washington needs to increase educational attainment. Most workers feel they do not currently have the skills they need to get ahead in their job, and they believe they will need continuous training to advance.⁶ A skills gap has long-term consequences for individuals and economies. People without a high school diploma are less likely to find a living-wage job and more likely to rely on public assistance.⁷ From incarceration and unemployment to civic engagement, low levels of educational attainment diminish a person's potential, and stunt economic growth.^{8,9,10}

As education levels increase, so do employment and wages (see Figure 2).¹¹ A skilled and educated workforce is healthier and more resilient.¹² Despite concerns about rising student-debt levels, job-market recovery after the Great Recession shows the continued value of a college education. Since the low point of the recession in January 2010, 99 percent of the 11.6 million new jobs have gone to workers with at least some college education.¹³

Statewide attainment goals set the course

Education is the fundamental building block of vibrant communities, civically engaged citizenry, and prosperous regional economies. The Washington Student Achievement Council (WSAC) is committed to building a future that provides equitable access to postsecondary education.

In 2014, the Legislature adopted statewide goals to increase educational attainment, that by 2023:

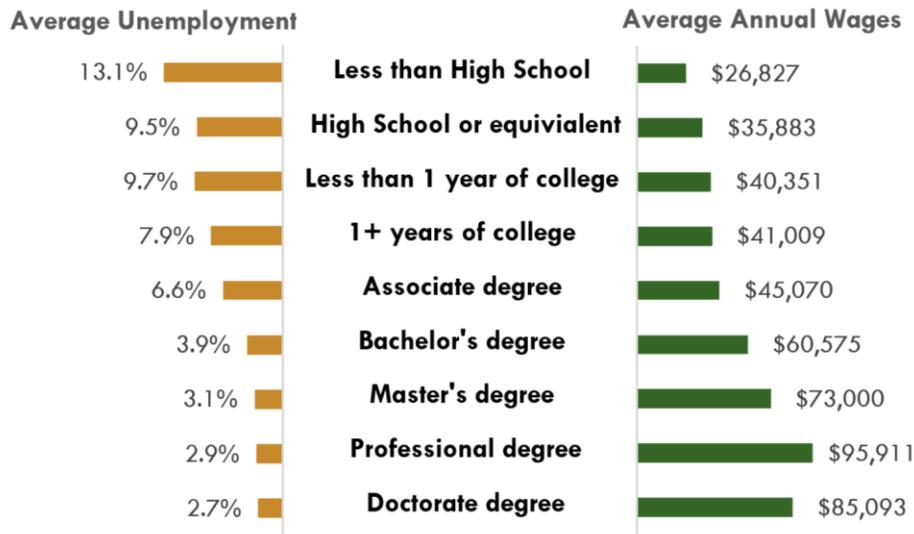
- All adults in Washington, ages 25-44, will have a high school diploma or equivalent.
- At least 70 percent of Washington adults, ages 25-44, will have a postsecondary credential.

WSAC proposed these goals in the 2013 Roadmap Report. The Council collaborated with policymakers, education leaders, and industry representatives from all regions of the state to develop the goals, based on workforce demand.

Since 2014, the attainment goals have served as a unifying purpose for partners from education, industry, and communities to bring a renewed focus and energy to the challenge of connecting youth and adults to college and career opportunities.

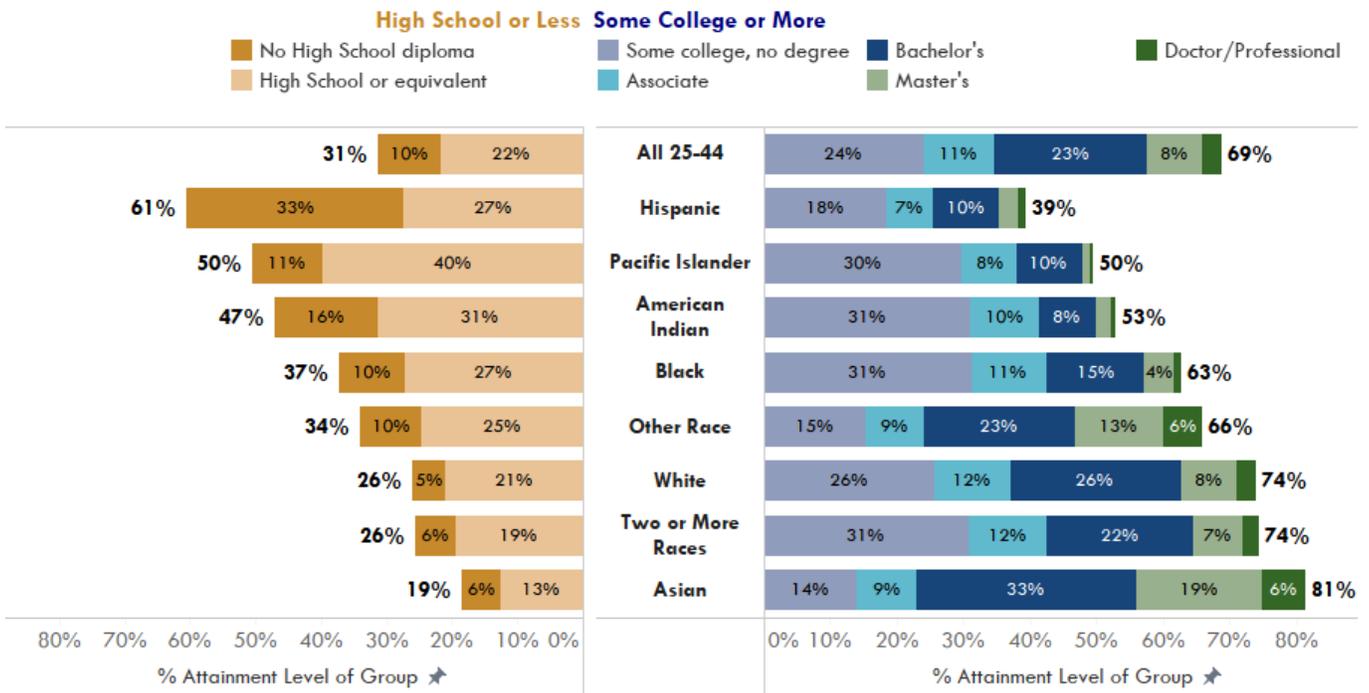
^a Between 2011 and 2015, Washington attracted a net of about 53,000 out-of-state workers with an associate degree or higher. During this time, Washington attracted nearly 7,500 workers with an associate degree, about 16,000 workers with bachelor's degrees, and over 29,000 workers with graduate degrees from other states.

Figure 2: Washington State Unemployment and Wages by Education Level



Source: Washington Student Achievement Council analysis of 2011-2015 American Community Survey.¹⁴

Figure 3: Educational Attainment by Race/Ethnicity for Washington's Population Aged 25-44



Source: WSAC Analysis of American Community Survey, 2011-2015.^b

^b The total percentages may not equal the sum due to rounding. Per NCES guidelines for race and ethnicity labels, American Indian includes Alaska Native, Black includes African American, Pacific Islander includes Native Hawaiian, and Hispanic includes Latino.

Measuring Progress

Progress on Educational Attainment Goals

Educational attainment has increased only slightly since 2011. Ninety percent of the population aged 25-44 has completed high school; this is a one percent increase compared to 2011, the baseline year. With regard to postsecondary attainment, 52.5 percent of the population aged 25-44 has a certificate, apprenticeship, degree, or higher, compared to 50 percent in 2011.^c

In Washington, the Hispanic/Latino subgroup shows the largest gap in educational attainment compared to the average attainment of the population aged 25-44. Approximately 33 percent of the Hispanic/Latino population has not yet obtained a high school degree or equivalent, compared to only 10 percent of the overall 25-44 population. This profound difference in high school completion ripples throughout the higher degree categories, resulting in only 14 percent of Hispanic/Latino adults holding a bachelor's degree or higher, compared to 34 percent of the 25-44 population (see Figure 3).

Progress on Postsecondary Affordability

The Legislature has improved college affordability by reducing tuition and slightly increasing State Need Grant service levels.^d However, cost of attendance remains a barrier for many current and prospective students.¹⁵

Due to large state-funding cuts from 2009 to 2013, tuition rates at the public institutions rose sharply (see Figure 4), resulting in a shift in who pays for instructional costs. Students are covering 58 percent of the cost at public four-year colleges, far above the pre-recession share of 38 percent. However, more recent reinvestments and tuition reductions have improved affordability in the public institutions, and costs after grant aid are lower for private four-year institutions.

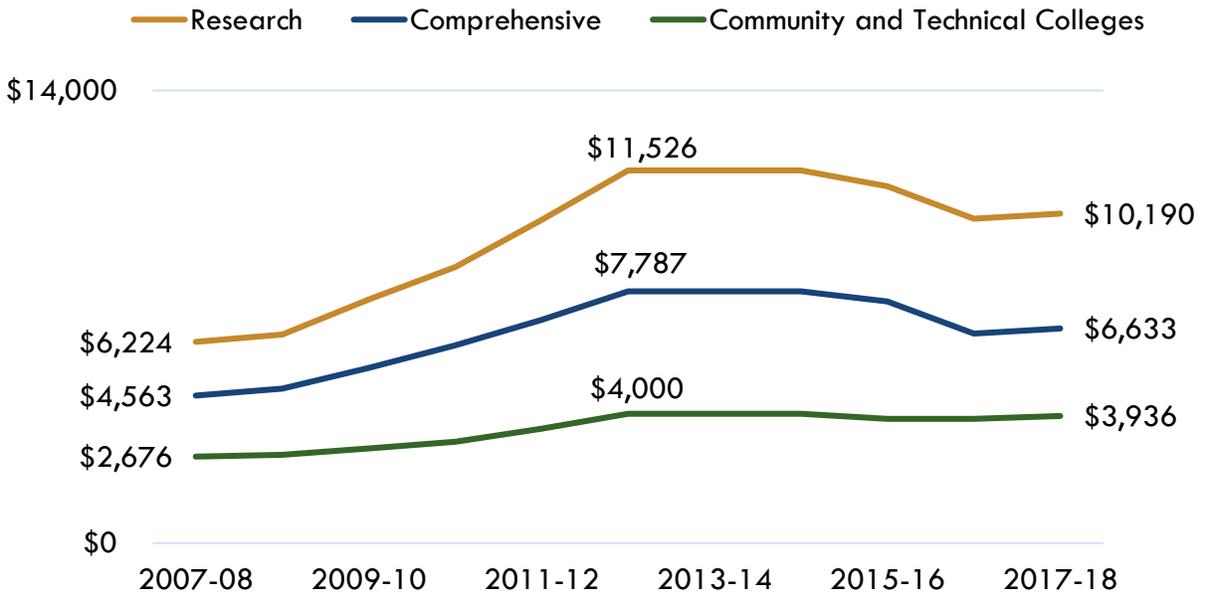
Financial aid applications have increased 50 percent since the Great Recession, while enrollments in public institutions have increased only seven percent.¹⁶ Washington's State Need Grant program still lacks the funding necessary to support eligible students, leaving over 20,000 unserved each year. While student-debt levels are lower than the national average, Washington bachelor's degree graduates who borrow still carry an average debt burden of over \$24,000.¹⁷

State aid is an important tool to reduce debt burdens, and it is likely that funding the State Need Grant program can help reduce the average debt Washington graduates face. In addition to stemming the rise of tuition and providing ample funding for institutions, sufficient state financial aid is essential to any affordability strategy. Strengthening both State Need Grant and the College Bound Scholarship program can help close the opportunity gap in K-12 and boost college-going rates, which continue to lag behind other states'.¹⁸

^c Attainment in this report is measured using the 2011-15 American Community Survey, Washington; in 2015, WSAC used the 2011-13 American Community Survey, Washington, however, the three-year estimates are no longer provided by the Census Bureau. Currently, the American Community Survey includes only one-year and five-year estimates. The five-year estimates provide more accurate measures of attainment for trend purposes.

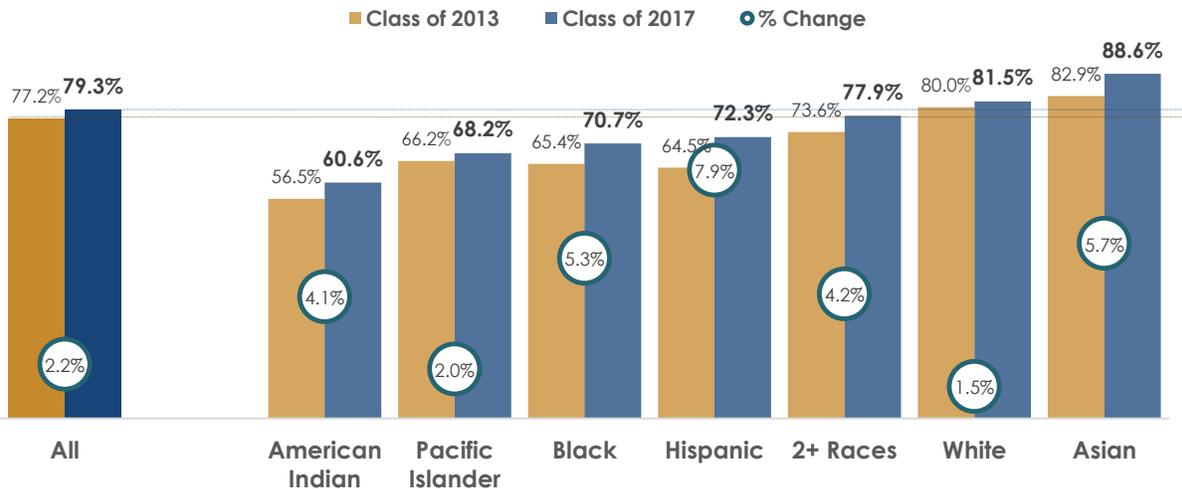
^d The improving economy has also contributed to lower cohort default rates on student loans in this time period for public and nonprofit institutions. Default rates at nonprofit four-year schools are now below four percent, per WSAC staff analysis of IPEDS data.

Figure 4: Resident Undergraduate Tuition Rates, 2008-2018



Source: WSAC staff analysis of published tuition and S&A fees for undergraduate resident students at Washington public institutions (November 2017).

Figure 5: Four-Year Graduation Rates, Class of 2013 and 2017



Source: Dropout and Graduation Reports, Office of Superintendent of Public Instruction (October 2017).

Progress on High School Completion

High School Completions

High school graduation rates are improving. Four-year high school graduation rates continue to climb, from 77.2 percent for the class of 2013 to 79.3 percent for the class of 2017. Five-year graduation rates have increased at a slightly higher rate over the same period.¹⁹

While most racial and ethnic subgroups' four-year graduation rates improved between the class of 2012 and the class of 2016, historically underserved student populations made notable gains.^e Hispanic, African American, Pacific Islander, and Native American students' rates improved by between 3.6 and 5.6 percentage points (see Figure 5).

Despite these improvements, large gaps between racial/ethnic groups continue for some populations.^f It is critical to address these gaps, especially since the majority of growth in the K-12 population is among students of color.²⁰ The state's Educational Opportunity Gap Oversight and Accountability Committee provides leadership on this issue.²¹ Successful state and local programs and initiatives contribute to increased graduation rates. Students in the College Bound Scholarship program graduate from high school at a rate similar to their peers from higher-income families.²² The Office of Superintendent of Public Instruction (OSPI) is continuing to work with districts to expand the reengagement of youth who are credit deficient through the Open Doors funding model.⁹ Many local school districts have used GEAR UP and other supports to improve high school graduation rates.

^e Adjusted four-year cohort graduation rates for students of two or more races declined 0.2 percent.

^f Each subgroup is an aggregate. Further analysis will provide additional insights into the performance of populations within each subgroup.

⁹ Further information on GATE, Open Doors and participating districts can be accessed at the OSPI website:

<http://www.k12.wa.us/GATE/SupportingStudents/StudentRetrieval.aspx>

^h Dual credit programs help students to enter postsecondary programs prepared for college-level courses and decrease time to completion of both associate and bachelor's degrees.

Dual credit programs are also correlated with increased high school completion; however, the cost of dual credit programs remains a barrier for many families.^{h,23} Running Start, College in the High School, Advanced Placement, International Baccalaureate, and Cambridge International all show participation gaps between students eligible for free and reduced priced lunch and their peers from higher-income families. Also, these programs exhibit disproportionate enrollment by race and ethnicity. For example, Hispanic students make up 20 percent of the high school population, yet are represented at rates of 12 to 15 percent in Running Start, Advanced Placement, and College in the High School programs.²⁴ Addressing these disparities will increase high school completion and college and career readiness.

Alternative High School Credentials

Fewer students are earning high school equivalency certificates. Following a substantial dip in 2014, overall awards have recovered somewhat to nearly 9,700 in 2015-16. This is still well below the more than 17,000 completions through these programs in 2012.

The number of students taking, completing, and passing high school equivalency tests dropped dramatically following the introduction of a new, more expensive, and more rigorous GED exam. In 2013, over 15,000 students passed the test, compared to just under 3,000 in 2014.²⁵ GED completions recovered somewhat to 5,800 by 2016.

Alternatives to the GED are expanding, including the High School 21+ program offered at community and technical colleges, which has grown from 1,500 completions in 2012 to over 2,800 in 2016. The number of

students who receive a high school diploma and associate degree concurrently also increased, moving from 700 in 2012 to 1,106 in 2016.

Progress on Postsecondary Enrollments and Completions

Enrollments

Washington's postsecondary enrollment trends are mixed. The percent of high school graduates enrolling immediately in college has remained steady over this five-year period.²⁶ However, consistent with previous economic recoveries, enrollments are down slightly overall.²⁷ Enrollments in less-than-two-year programs experienced the largest decline of 21 percent.ⁱ There were some areas of improvement. Greater job-demand has supported growth in apprenticeship enrollments, from 3,040 in 2012 to 5,025 in 2016.²⁸

Two-year program enrollment trends by race/ethnicity are also mixed (see Figure 6). Fall enrollments of African American students in the two-year sector fell by nearly ten percent, compared to two percent in the four-year sector. This disproportionate decline in the two-year sector is mostly a result of the decline in enrollments in the for-profit sector. Hispanic student enrollments increased by 27 percent in the two-year sector, outpacing demographic growth.²⁹

Further, four-year college enrollments have increased three percent (see Figure 7).ⁱ

Enrollment trends were also mixed for different demographic groups. While Native American students' high school graduation rates climbed between the class of 2012 and the class of 2016, enrollment in four-year programs declined by just over a third. However, Hispanic students' enrollment in four-year programs increased over 40 percent, while the Hispanic population grew by less than 20 percent—so enrollments grew at twice the rate of population growth.^k Students identifying as being of two or more races also experienced an increase in enrollments, though this is likely due to demographic growth in this category.^{l,m}

More women than men are enrolled in four-year postsecondary programs, representing about 55 percent of total enrollments. This has remained stable over the five-year period. However, women remain underrepresented in a number of STEM fields critical to our economy. In 2016, women made up 34 percent of students completing an associate or bachelor's degree in a STEM field, and 22 percent of computer science completions.³⁰

Completions

While overall enrollments decreased slightly during the five-year period, the total number of postsecondary awards increased by nearly five percent (see Figure 8). Of all award types, the number of certificates requiring less than one year to complete increased the most (14.8 percent).

ⁱ All types of undergraduate and graduate students, at both public and private institutions are included. Counts are for students who enrolled in the fall term. It is important to note that nationally, about 35 percent of enrollments into community colleges occur outside of the fall. See Voight, J. A., and Voight, M., (2016). *Toward Convergence: A Technical Guide for the Postsecondary Metrics Framework*, Institute for Higher Education Policy.

^j Washington Student Achievement Council analysis of Integrated Postsecondary Education Data System (IPEDS) 2011-2016 data, U.S. Department of Education. Note: These data capture only first-time, full-time fall enrollments, and are thus likely to undercount enrollments of part-time students.

^k Because the Census spans multiple years, as a proxy, WSAC examined the growth in the Hispanic enrollments in the K-12 system as displayed in the OSPI Report Card, 2012-13 through 2015-16. Hispanic enrollments grew from 214,144 in October of 2012 to 251,334 in 2016, a 17 percent increase.

^l The option to report two or more races was voluntary in 2008 and became mandatory in 2010. Anecdotal evidence suggests some of the decline in Native Americans may be a reporting artifact.

^m The Census Bureau notes that Asian and mixed-race people are the two fastest-growing segments of the U.S. population. Non-Hispanic whites' birth rates continue to be outpaced by death rates, leading to a shrinking non-Hispanic white population. Census Bureau, June 22, 2017. Release Number. CB17-100.

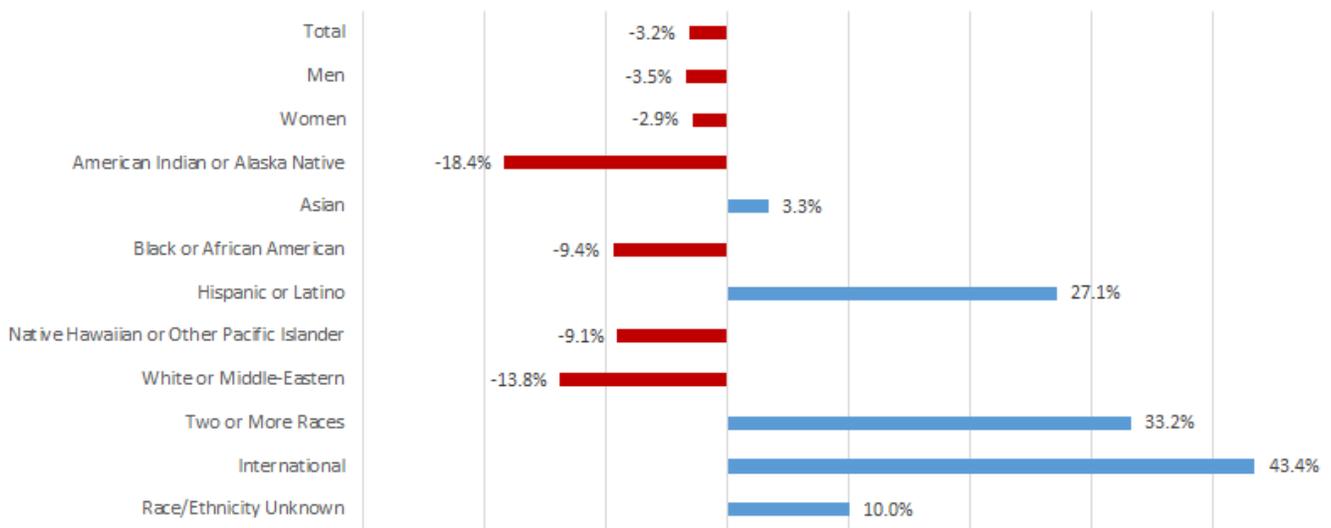
Conversely, certificates requiring at least one year represented the largest decrease (-7.2 percent). The number of associate and bachelor's degrees increased by 5.6 percent and 3.8 percent, respectively.

Degrees awarded to Hispanic students surged from 2012 to 2016, rising by over 50 percent for both associate and bachelor's degrees.³¹ This led to a higher share of degrees awarded to underrepresented students over this period. However, not all groups saw improvements. Total awards were lower for African American and Native American students, illustrating that more work is required to eliminate opportunity gaps.

Rates of completion vary by institution and sector and can be complex to measure. Traditional completion rates use a cohort of

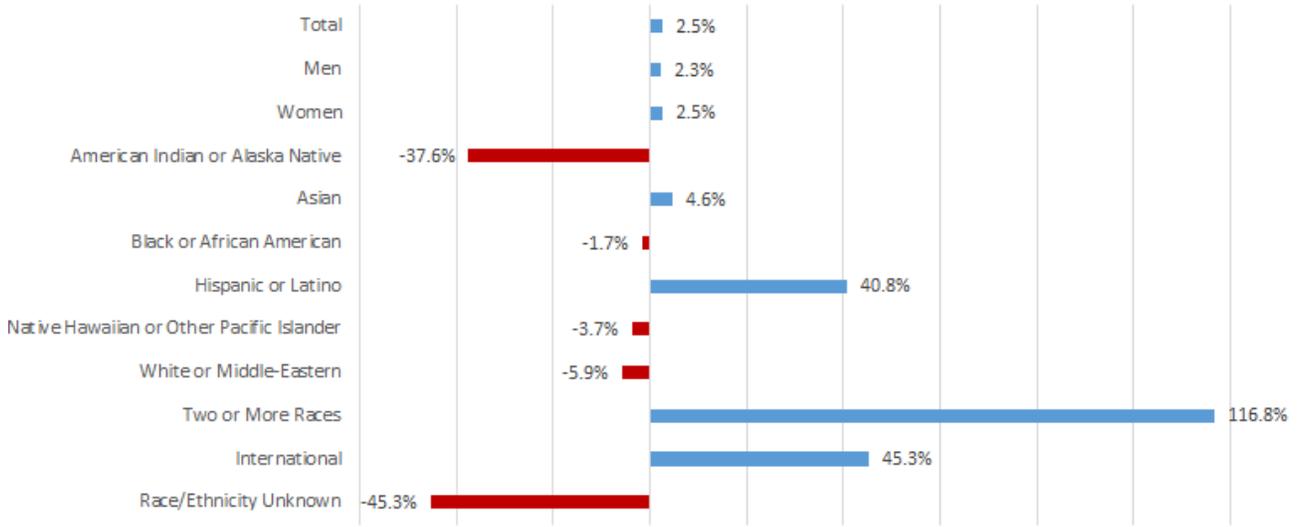
students limited to full-time, first-time freshmen, which excludes part-time students and students who have transferred. By this metric, graduation rates in the baccalaureate institutions are essentially unchanged over four years, at 68 percent. Another more inclusive method is to compare completions to the FTE (full-time equivalent) enrolled during the academic year; optimally, a two-year completion ratio would be 50 percent, and a four-year would be 25 percent. Completion ratios have remained stable at about 25 percent for the public and private four-year sector from 2012 to 2016. In the community and technical colleges, while enrollments decreased during this period, the completion ratios improved six percentage points to 36.3.³²

Figure 6: Percent Change in Public and Private Two-Year Fall Enrollments by Race/Ethnicity, 2011-2015



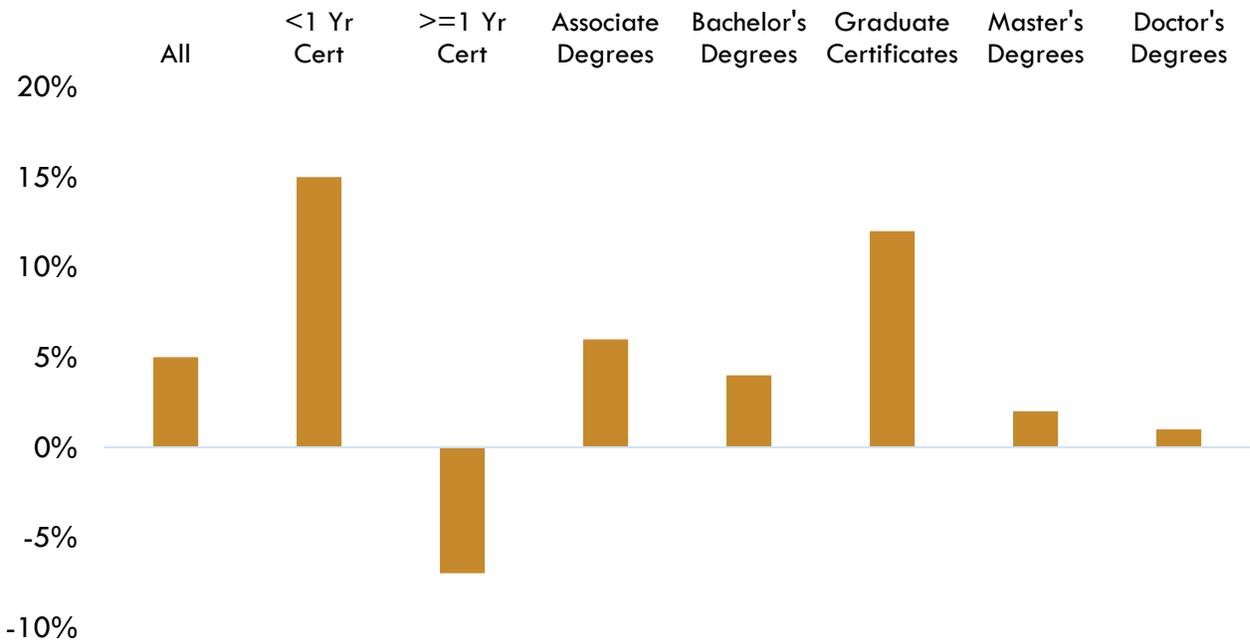
Source: WSAC staff analysis of IPEDS Fall Enrollment data for institutions reporting in from the U.S. Department of Education (September 2017).

Figure 7: Percent Change in Public and Private Four-Year Fall Enrollments by Race/Ethnicity, 2011-2015



Source: WSAC staff analysis of IPEDS Fall Enrollment data for institutions reporting in from the U.S. Department of Education (September 2017).

Figure 8: Awards by Level, 2012-2016



Challenges

To meet the state's educational attainment goals, we must address four critical challenges:

- Affordability
- The opportunity gap
- Reengaging adults
- Regional challenges

Affordability

Students cite financial constraints as the primary deterrent to program completion.³³ The costs of higher education extend beyond the tuition “sticker price,” as tuition makes up less than half of students’ educational expenses. Students attending public colleges are responsible for a larger share of the total costs; students are covering 58 percent of the cost of instruction at public four-year institutions, far above the pre-recession share of 38 percent.³⁴ To stay in school, students combine financial aid and scholarships with work, loans, and other resources to manage educational expense. While some students may have the resources to enroll and stay in school, many others do not. Unable to afford higher education, these students may postpone enrollment, take fewer classes, or suspend their coursework altogether. The lack of affordable pathways to completion hurts Washington families, dampens our economy, and puts the statewide educational attainment goals out of reach. Adequately funding institutions, and ensuring state financial aid programs can serve all eligible students, represent key solutions to the affordability problem.ⁿ

The Opportunity Gap

The opportunity gap is more than a single metric or performance indicator. Factors influencing opportunity gaps include, but are not limited to, school-building resource

allocation, participation in college-exposure and preparation activities, teacher quality, and access to rigorous course selection, which includes dual credit options. Unfortunately, the opportunity gap is more salient and exacerbated in low socioeconomic communities and in communities of color. Given the complexity and interconnectedness of the variables that impact the opportunity gap, a system-wide approach addressing the whole student is necessary. Statewide efforts can address equity disparity, but collaboration is essential. Closing the opportunity gap will require the collective efforts of K-12, higher education, community-based organizations, and other critical partners.

Reengaging Adults

Meeting the needs of K-12 and traditional-age students will make a dramatic difference in educational outcomes, but it will not be enough to meet our state's educational attainment goals. When Washington becomes a top-performing state in its high school graduation and college-going rates, we will produce about half of the credentials needed to meet the needs of our workforce. Yet job growth will soar in the near-term with 740,000 openings expected. The only way to ensure our residents are able to compete for Washington's jobs is to engage adult learners in intentional and meaningful ways.^{35,36} To meet the goals, we must reengage adult students, ages 25 to 44. Of nearly 400,000 adults who have not completed a postsecondary credential, nearly three-fourths have at least a year of college. Completing a credential would improve career earnings and employment outcomes for these individuals, while also contributing to overall statewide educational attainment. We must address the unique challenges of adult students, including financial constraints, work, and family obligations.

ⁿ The State Work Study program leverages private participation for wage matches to provide financial aid in the form of wages for part-time work related to study. The program enables participants to use wages to reduce debt and gain valuable employability skills, work experience, and connections. Both undergraduate and graduate students can be eligible yet demand far surpasses available funds.

Regional Challenges

Washington is diverse economically, geographically, and demographically. Similarly, educational opportunities are not distributed equally across Washington, as each region houses unique educational and economic challenges and opportunities. Projected job growth – including among industries with emerging regional competitiveness in health care, information, professional and technical services, and manufacturing – requires education beyond high school.³⁷ Across 71,000 square miles, the economic sectors and educational attainment levels vary by region. The percentage of residents with at least an associate's degree ranges from 22 in Adams County to 62 in Whitman County.³⁸ WSAC is convening conversations in several communities around the state to identify strategies to address these and other locally identified challenges, and to energize local action around those strategies.

For More Information

For additional related information and supplementary materials, please visit: www.wsac.wa.gov/roadmap.

Workgroup Appreciation

WSAC greatly appreciates the assistance of the technical workgroup:

- Melissa Beard, Office of Financial Management/Education Research and Data Center
- Violet Boyer, Independent Colleges of Washington
- Deb Came, Office of Superintendent of Public Instruction
- Paul Francis, Council of Presidents
- Darby Kaikkonen, State Board for Community and Technical Colleges
- Katie Weaver Randall, Office of Superintendent of Public Instruction
- Dave Wallace, Workforce Training and Education Coordinating Board

Endnotes

- 1 Washington Roundtable, (2016). WA Kids 4 WA Jobs. Retrieved from www.waroundtable.com/wp-content/uploads/2017/03/WKWJ_FINAL_Report.pdf.
- 2 Workforce Training and Education Coordinating Board, (2013). Washington Employer Survey.
- 3 Washington Roundtable, (2016). WA Kids 4 WA Jobs. Retrieved from www.waroundtable.com/wp-content/uploads/2017/03/WKWJ_FINAL_Report.pdf.
- 4 Washington Student Achievement Council, (2017). Staff Analysis of 2011-2015 American Community Survey Data.
- 5 Western Interstate Commission for Higher Education (2017). Washington State Regional Educational Needs Assessment, for the Washington Student Achievement Council.
- 6 Pew Research Center (2016.) The State of American Jobs. Washington, DC.
- 7 Rumberger, R. W. (2011). Dropping out: Why students drop out of high school and what can be done about it. Harvard University Press.
- 8 Trostel, P., (2016). It's Not Just the Money. The Benefits of College Education to Individuals and Society. Margaret Chase Smith Policy Center and School of Economics, University of Maine for the Lumina Foundation.
- 9 Saving Futures, Saving Dollars: The Impact of Education on Crime Reduction and Earnings, (2013). Alliance for Excellent Education. Retrieved from <https://all4ed.org/wp-content/uploads/2013/09/SavingFutures.pdf>.
- 10 Khatiwada, I., McLaughlin, J., Palma, S., and Sum, A. The Consequences of Dropping Out, (2009).
- 11 Carroll, S. J., & Erkut, E. (2009). The Benefits to Taxpayers from Increases in Students' Educational Attainment (Tech.). Santa Monica, CA: The Rand Corporation. Retrieved from www.rand.org/pubs/monographs/MG686.html
- 12 Ritter, B., (2015). Factors Influencing High School Graduation. Issue Brief prepared for the Washington Student Achievement Council. Retrieved from www.wsac.wa.gov/sites/default/files/2015.12.3.Ritter.Graduation.Issue.Brief.pdf
- 13 Carnevale, A.P., Jayasundera, T., and Gulish, A. (2016) America's Divided Recovery: College Haves and Have-Nots. Washington, DC: Georgetown University Center on Education and the Workforce.
- 14 Schiller, J.S., Lucas, J,W,, Peregoy, J.A. (2012). Summary health statistics for U.S. adults: National Health Interview Survey, (2011). National Center for Health Statistics. Vital Health Stat 10 (256).
- 15 Washington Student Achievement Council staff analysis of Unit Record Report data, 2013-14 - 2015-16.
- 16 Washington Student Achievement Council staff analysis of Budget Driver Reports and FAFSA records data, 2007-08 through 2014-15.
- 17 Student Debt and the Class of 2016. Washington DC: The Institute for College Access and Success, fall 2017, retrieved from https://ticas.org/sites/default/files/pub_files/student_debt_and_the_class_of_2016_nr.pdf
- 18 NCHEMS analysis of IPEDS data. Retrieved from <http://www.higheredinfo.org/dbrowser/index.php?measure=32>.
- 19 OPSI Washington State Report Card. Retrieved from: <http://reportcard.ospi.k12.wa.us/>.
- 20 Western Interstate Commission for Higher Education (2016). Knocking at the College Door: Projections of High School Graduates.
- 21 Educational Opportunity Gap Oversight and Accountability Committee, (2017). Closing the Opportunity Gap in Washington's Public Education System. Retrieved from <http://www.k12.wa.us/Workgroups/EOGOAC/pubdocs/EOGOAC2017AnnualReport.pdf>.
- 22 OSPI staff analysis of WSAC College Bound Scholarship applicant data.
- 23 Shapiro, D., Dundar, A., Wakhungu, P.K., Yuan, X., Nathan, A, & Hwang, Y. (2016). Time to Degree: A National View of the Time Enrolled and Elapsed for Associate and Bachelor's Degree Earners (Signature Report No. 11). Herndon, VA: National Student Clearinghouse Research Center.
- 24 2015-16 Data from OSPI Report Card High School Dual Credit Participation Summary. Retrieved from <http://reportcard.ospi.k12.wa.us>.
- 25 GED Test Changes and Attainment (2016). Washington Student Achievement Council with partnership from staff of State Board for Community and Technical Colleges.
- 26 Education and Research Data Center, (2015). High School Feedback Report, 2015, The Office of Financial Management, Washington State.
- 27 National Student Clearinghouse Research Center, (2017). Enrollment Trends, and Current Term Enrollment Estimates, Spring 2017.
- 28 Washington State department of Labor and Industries, Apprenticeship section, (2015).
- 29 WSAC staff analysis of IPEDS Fall Enrollment data from the U.S. Department of Education (September 2017).
- 30 Washington State STEM Education Innovation Alliance, (2017) 2017 STEM Education Report Card, Washington Student Achievement Council.
- 31 WSAC staff analysis of IPEDS Completions, survey A data from the U.S. Department of Education (September 2017).

- 32 WSAC staff analysis of IPEDS Completions, survey A data from the U.S. Department of Education (September 2017).
- 33 National Student Financial Wellness Study. Ohio State University. Center for the Study of Student Life. (2014).
- 34 Washington Student Achievement Council staff analysis of Budget Driver Reports and FAFSA record data, 2007-08 through 2014-15.
- 35 Increasing College Attainment: Variations in Returns to States and their Residents. National Center for Higher Education Management Systems. Retrieved <http://www.nchems.org/swf/NCHEMSCLASPWashingtonModel.swf>.
- 36 Pathways to Great Jobs in Washington State. Business Roundtable. Retrieved www.waroundtable.com/wp-content/uploads/2017/03/WKWJ_FINAL_Report.pdf
- 37 A Skilled and Educated Workforce 2015 Update: An analysis of postsecondary education, workforce preparation, and employer demand in Washington. Washington Student Achievement Council, State Board for Community and Technical Colleges and Workforce Training and Education Coordinating Board.
- 38 U.S. Census Bureau, 2010-14 American Community Survey 5-Year Estimates as cited in Lumina's Stronger Nation 2016. Residents ages 25-64 with at least an associate degree by county.