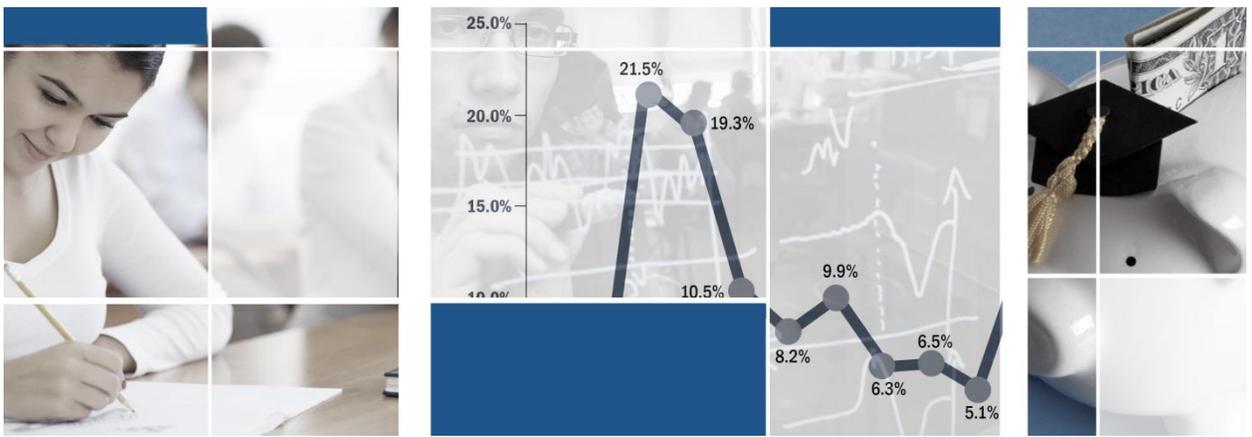


January 2017



# The Virginia Plan for Higher Education

Annual Report for 2016 to the General Assembly of Virginia

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## Overview

Virginia faces a future in which higher education will play an increasingly important role. Virginians will need deeper and broader knowledge and skills to be engaged, productive participants in our evolving Commonwealth and its economy. At the same time, the demographics of the emerging generation are changing, as an increasing share of our youth will come from populations that historically have been underrepresented in both higher education and the highly-educated sectors of our workforce. These changes transpire at a time when the cost of attending college has increased beyond the capacity of many Virginians.



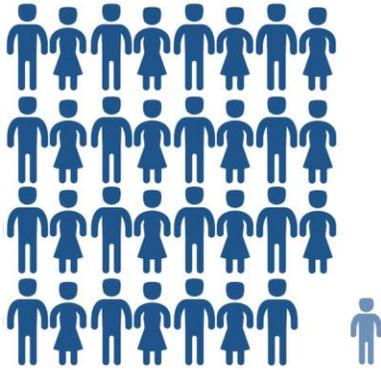
The Virginia Plan for Higher Education is designed to identify trends that the Commonwealth must address if it is to prosper and succeed. Through input by higher education partners, The Virginia Plan is intended to help guide a vision for Virginia’s future through a common framework. This framework is built on the premise that all partners in higher education must work together to help Virginia, its citizens and its regions.

## The Value of Postsecondary Education

Achieving education beyond high school supports the prosperity of Virginia, its citizens and its regions. An educated population and well-trained workforce increase economic competitiveness, improve the lives of individuals and support greater community engagement.

According to the Georgetown Center on Education and Workforce, 99% of the jobs (11.5 million) created since the great recession required workers with more than a high-school diploma. Only 80,000 jobs required a high-school diploma or less.

### New Jobs Require More Than a High School Degree



Of the 11.5 million new jobs created since the great recession, 99% require workers with more than a high-school education. Only 80,000 jobs created since the recession required a high-school diploma or less.

Credentials and degrees add value to the Commonwealth. An educated population and well-trained workforce increase economic competitiveness, improve the lives of individuals and support greater community engagement.

Source: Georgetown Center on Education and the Workforce

In addition to needing a postsecondary education to meet current job demands, individuals with an associate degree or greater are 38% more likely to have employer-sponsored health care than those with a high-school diploma. Communities and regions also prosper from higher levels of postsecondary education. Individuals are more likely to vote in an election and volunteer in their community than others with postsecondary education credentials.

Individuals with higher levels of postsecondary education also provide a greater net benefit to taxpayers through increased tax revenues and reduced government expenditures through social security, Medicaid, Medicare and other services.

## Lifetime Fiscal Impact of Higher Education

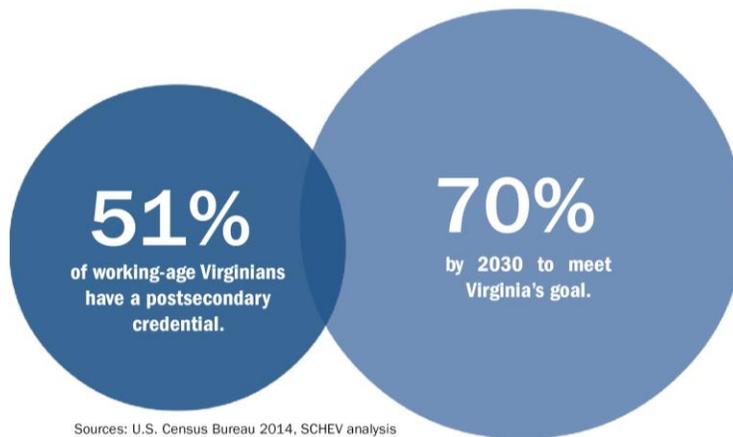
High School Diploma		Associate Degree		Bachelor Degree	
Tax Revenues	\$237,369	Tax Revenues	\$333,373	Tax Revenues	\$510,814
– Government Expenditures	\$211,431	– Government Expenditures	\$161,245	– Government Expenditures	\$129,762
<b>NET BENEFIT</b>	<b>\$25,938</b>	<b>NET BENEFIT</b>	<b>\$172,128</b>	<b>NET BENEFIT</b>	<b>\$381,051</b>

### Setting the Objective for Virginia to Be Best-educated State by 2030

In the development of The Virginia Plan for Higher Education, the council engaged stakeholders across Virginia to develop a long-term vision that supports the value postsecondary education offers its citizens, its regions and current and future businesses.

The vision focused on supporting higher education at all levels, including workforce credentials, such as industry certifications, state licensures, apprenticeships, and certificates, as well as traditional degrees. The objective set was to ensure that 60% of working-age Virginians (ages 25-64) held a degree (associate or greater) and an additional 10% of the population held a workforce credential (postsecondary certificate, industry certification, state licensure or apprenticeship) based on U.S. Census data. In total, 70% of the population would hold some postsecondary credential by 2030; this, based on current trends and estimates, would place the Commonwealth as the top state for educational attainment.

### Virginia's Objective to Be the Best-educated State



Sources: U.S. Census Bureau 2014, SCHEV analysis of best-educated state

While having a well-educated population is beneficial for Virginia, it is also important to ensure that additional credentials align with the talent needs of businesses and that the credentials earned are high-quality. In the coming years, through several state and national projects, Virginia will measure quality and assess how well credentials produced by educational institutions are meeting the demands of the employers.

### Goals, Measures and Initiatives in Support of The Virginia Plan

To meet this vision of becoming the best-educated state by 2030, the council developed a framework for identifying key areas of focus, areas to measure progress and priorities for the coming years through goals, measures and initiatives. This included the following:

- **Goals (4):** Access and affordability, student success, investment and innovation, economic and cultural prosperity.
- **Measures and targets (6):** Awards, student success, affordability, research, price, economic prosperity.
- **Initiatives (6):** Developing and promoting of affordable pathways and pre-K-12 partnerships, seeking legislative changes to support sustainable public funding, recommending initiatives for further restructuring and shared services, measuring quality of undergraduate education, launching a communication strategy and promoting economic development through research.

This report provides an update on progress in each of these areas along with findings and recommendations.

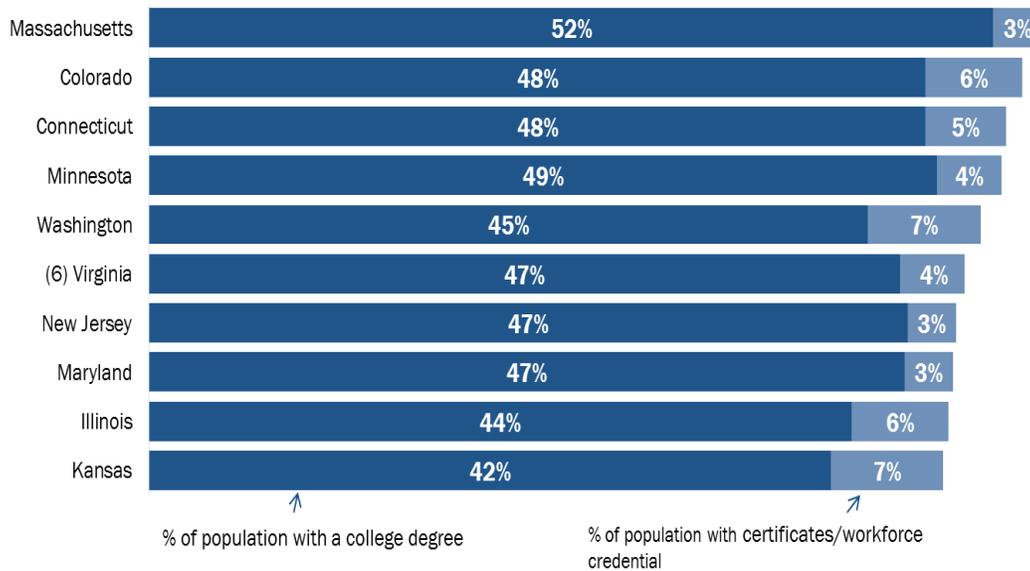


## Virginia’s Progress Toward Best-Educated State Ranking by 2030

Based on recent data produced by Lumina Foundation, about 51% of the working-age population ages 25-64 hold a degree or certificate—ranking Virginia sixth-highest among states in the percentage of those with a credential. While the percentage of population with a degree has increased over the last decade, other states also are increasing efforts to improve their education levels as part of state economic-development efforts.

### Top 10 States with Highest Educational Attainment

Source: Lumina Foundation: [www.luminafoundation.org/stronger\\_nation2016](http://www.luminafoundation.org/stronger_nation2016)



Regional competitiveness also is an important component to business attraction and expansion. Currently, when compared to neighboring states, Virginia ranks first in the percentage of working-age adults with a degree or credential.

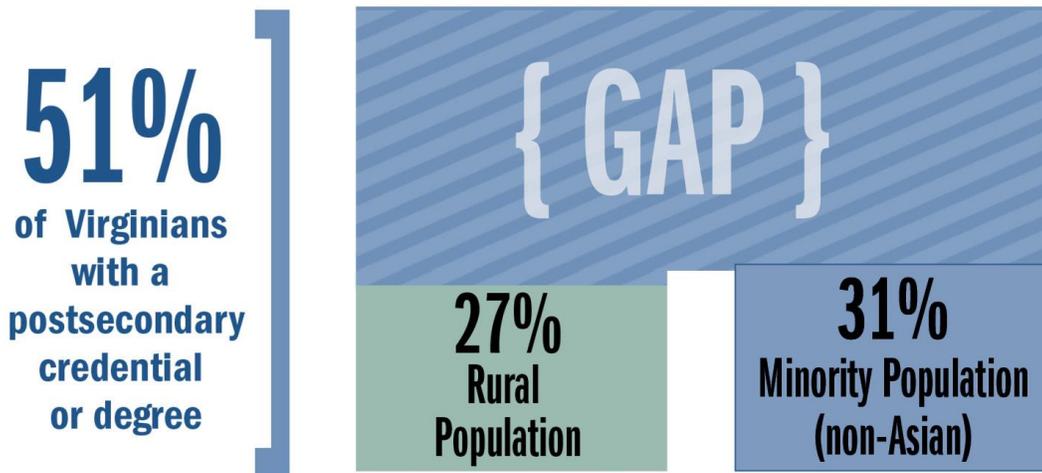
<b>Educational Attainment Rate of Neighboring States for Working Age Adults (ages 25-64) with an Degree or Workforce Credential</b>	
State	Percent
<b>Virginia</b>	<b>50.6</b>
Maryland	49.9
North Carolina	45.3
Pennsylvania	43.8
Delaware	43.7
Kentucky	42.5
Tennessee	39.3
West Virginia	32.6
Source: Stronger Nation 2016 Report, Lumina Foundation <a href="http://strongernation.luminafoundation.org/report/2016/">http://strongernation.luminafoundation.org/report/2016/</a>	

While Virginia ranks high among its working-age population, additional analysis of individuals ages 25-34 with an associate degree or greater provides a potential indicator that this ranking could decline as the population ages: Virginia’s ranking slips to 11th when compared to other states. While the educational-attainment rate of the 25-34 year old population is similar to the larger 25-to-64-year-old group, 46.6% and 47.7% respectively, several states have notably higher educational attainment rates for their younger populations, including Massachusetts, Minnesota, Illinois and Maryland.

<b>Educational Attainment Rates of those with an Associate Degree or Better by Age</b>			
State	% Estimate, Population Age 25-34, Associate's Degree and Higher	Rank Age 25-34	% Estimate, Population Age 25-64, Associate's Degree and Higher
Massachusetts	56.5	1	52.4
Minnesota	53.0	2	48.9
New York	52.3	3	46.3
New Jersey	49.4	4	47.1
Iowa	48.8	5	43.3
Illinois	48.6	6	43.6
Maryland	48.4	7	46.9
Nebraska	48.3	8	44.0
North Dakota	47.9	9	45.2
Connecticut	47.9	10	48.2
<b>Virginia</b>	<b>47.7</b>	<b>11</b>	<b>46.6</b>
Colorado	46.4	12	48.2
Source: U.S. Census Bureau, 2014 American Community Survey; Table B15001			

While Virginia’s ranking in education attainment rates is high, gaps in education-attainment rates remain across the state by race and region. In rural areas of the state, only 27% of Virginians have an associate degree or higher, only 31% of non-Asian minority Virginians hold an associate degree or higher—an estimated 20-percentage-point gap compared with the current total population of 51% with an associate degree or credential.

### Gaps in Educational Attainment in Virginia



Sources: Lumina Foundation, Stronger Nation 2016; SCHEV staff analysis.

## Progress on Measures and Targets

To track progress toward becoming the best-educated state, the council developed six measures and targets that align with the goals and strategies of the plan. These measures serve as a baseline for future reports as data are available. The following table provides a brief overview of progress on each measure with further details provided for each measure in the sections after.

Measures and Targets	Trend from Baseline
<b>2030 Goals</b>	
<b>Awards:</b> Grant 1.5 million awards, including those that close the gap in unfilled jobs	↑
<b>Success:</b> Annually improve completion rates that close the gap between underrepresented populations and traditional students	→
<b>Affordability:</b> Meet half of the cost of attendance for low- and middle-income students through expected family contribution and state and federal grant aid	→
<b>Research:</b> Increase Virginia’s research expenditures as a percent of national totals by 30%	↓
<b>Annual Commitments</b>	
<b>Price:</b> Keep undergraduate tuition and fees as a percentage of family income lower than the national average and less than 10% for low- and middle-income students	↓
<b>Economic Returns:</b> Ensure that 75% of graduates three years after graduation earn sustainable wages	→

## Awards

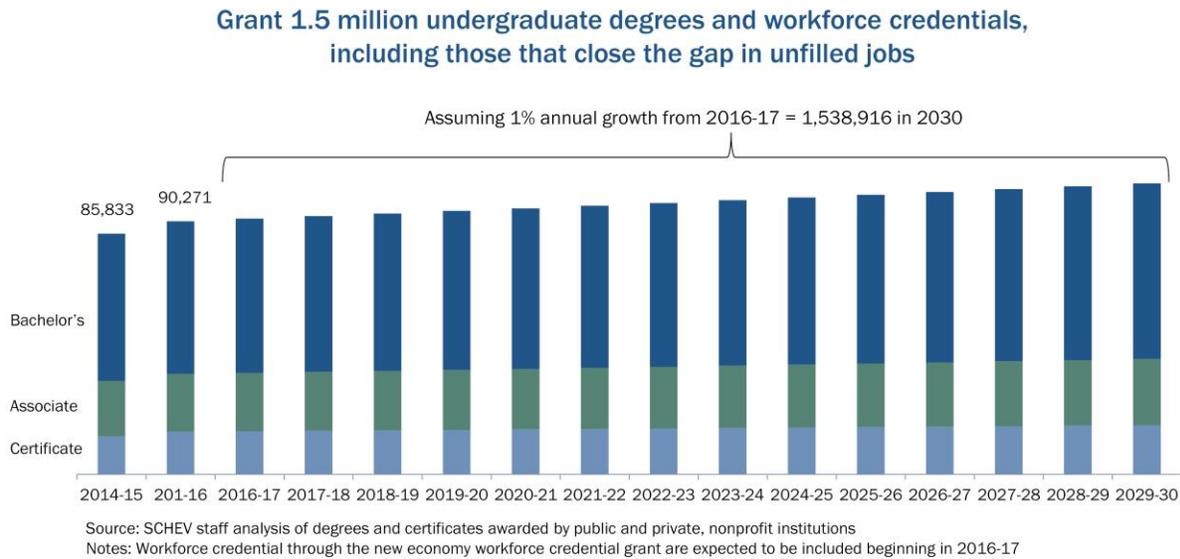
*Grant 1.5 million awards by 2030, including those that close the gap in unfilled jobs*

Award completion is a primary measure to becoming the best-educated state. Current estimates include awards for associate degrees, bachelor’s degrees and certificates based on historic trends between education-attainment rates using census data and the number of awards issued by public and private nonprofit institutions.

SCHEV continues to monitor graduate-level degree production and, as data become available through the New Economy Workforce Credential Grant, will add industry certifications and state licensures related to postsecondary training in the FY 2018. In addition, SCHEV will work with partners, including the Virginia Economic Development Partnership and the Virginia Board for Workforce Development, to track how awards are eliminating gaps in unfilled jobs through the development of a common methodology to measure demand.

In 2015-16, Virginia’s public and private nonprofit institutions issued a total of 90,326 undergraduate degrees and certificates. Including graduate degrees and certificates, the total awards for the same year was 119,934 — a record high for the Commonwealth. SCHEV staff estimates that with continued annual growth of 1%, Virginia will meet the

target of 1.5 million by 2030.<sup>1</sup> (See chart, following.) More information on awards is available through the SCHEV report on *Awards for 2015-16: Degrees and Certificate Completions at Virginia’s Public and Private Nonprofit Institutions* available at <http://schev.edu/index/reports/schev-reports>.



## Success

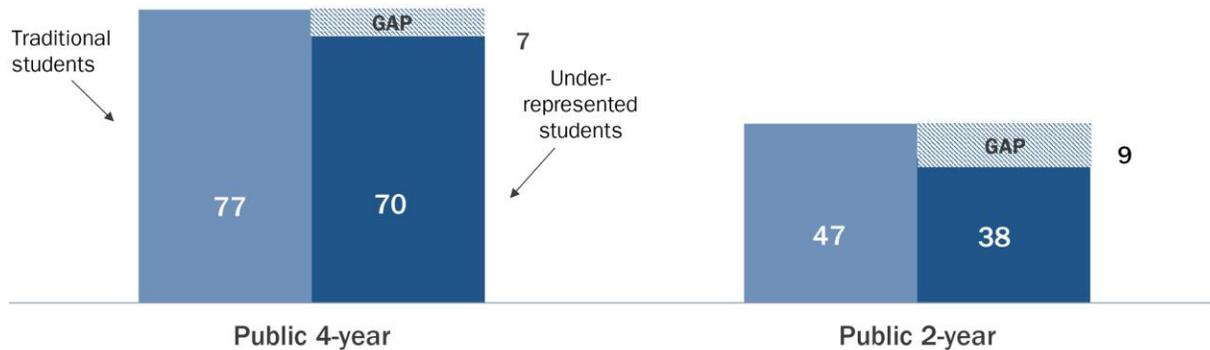
*Annually improve completion rates that close the gap between underrepresented populations and traditional students by 2030.*

While Virginia ranks higher than average in public college graduation rates when compared to other states (based on the College Completion report published by the *Chronicle of Higher Education*), gaps remain in completion rates of underrepresented students and traditional students. Underrepresented students are those who are of minority race or ethnicity, receive Pell grant funding, are age 25 or older, or represent regions of the state with lower education-attainment rates. These gaps in completions average about 10% among public and private two- and four-year institutions and are illustrated in the figure below.

<sup>1</sup> Virginia’s for-profit institutions also contribute to the total number of Virginians with postsecondary credentials. Those data, however, are not available in a comparable format.

For Virginia to continue to produce the awards needed to be the best-educated state, a focus area must be to close the gaps in educational attainment. Currently, the gaps in completion using the SCHEV calculated student-success index among public four-year and two-year institutions are 7 percentage points and 9 percentage points, respectively.

**Annually improve completion rates that close the gap between underrepresented populations and traditional students by 2030**



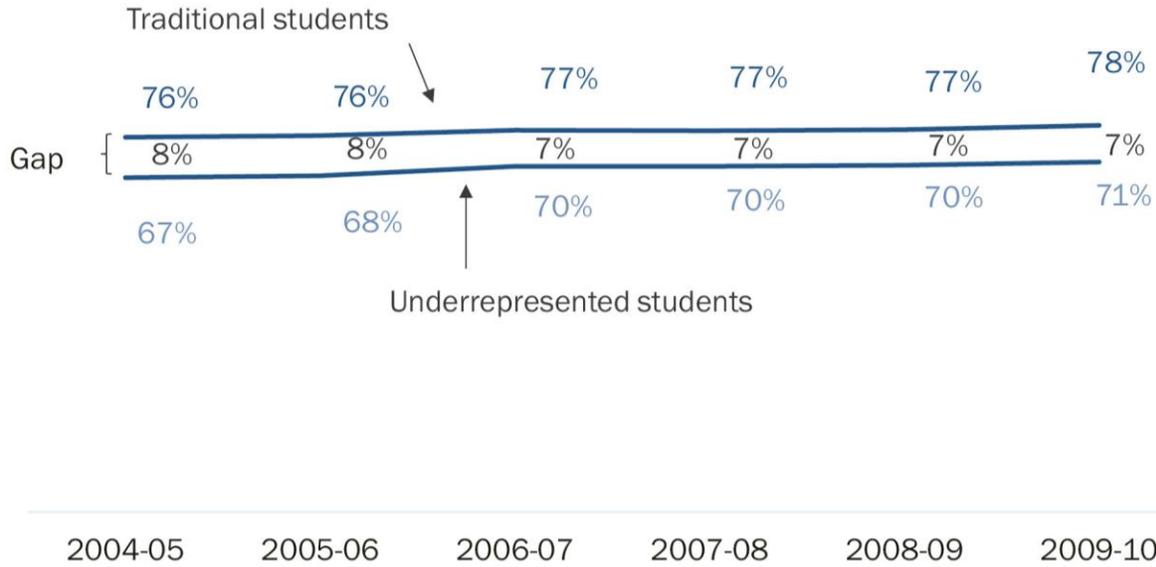
**Note:** 2008-09 cohort for 4-year/2010-11 cohort for 2-year. Completion rates based on the student success index for normal-time. Underrepresented students are those who are of minority race/ethnicity, low-income, ages 25 and older or from cities/counties of the state with the lowest quintile of educational attainment based on Census data.  
**Source:** [http://research.schev.edu/gradrates/success\\_index.asp](http://research.schev.edu/gradrates/success_index.asp)

Over the past several years, the student success and completion of both traditional and underrepresented students have increased (**see graphs on next page**). Success rates at four-year institutions increased 2 percentage points from 76% to 78%, while underrepresented students increased 4 percentage points from 67% to 71%; the gap between the rates decreased slightly from 8 percentage points to 7 percentage points.

Similar to the public four-year rates, traditional and underrepresented students' success and completion rates increased at public two-year institutions, while the gaps between the student groups remained at between 9 and 10 percentage points. Success rates at public two-year institutions grew faster than those at four-year institutions; however, the two-year institutions' traditional students have lower rates of success and completion. Additional data by specific underrepresented populations (Pell status, age, and race) are available on the SCHEV research website:

[http://research.schev.edu/enrollment/DistUnder\\_RepPop.asp](http://research.schev.edu/enrollment/DistUnder_RepPop.asp)

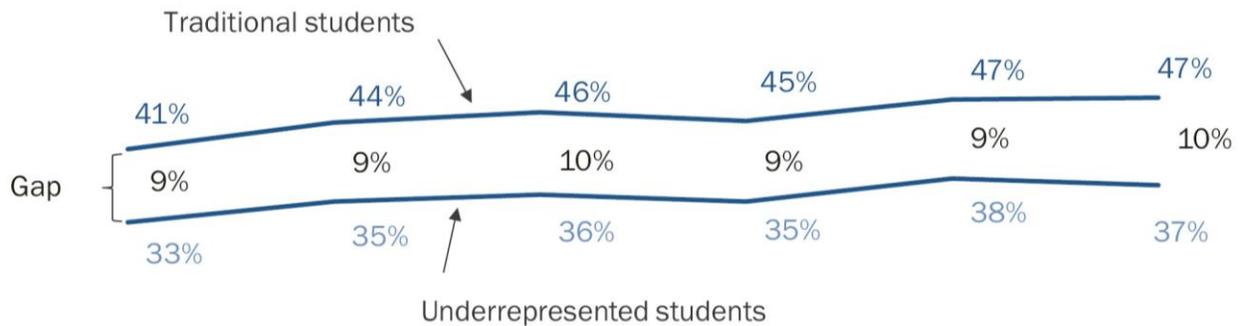
### Success and Completion Rates Public 4- year Institutions



Source: [http://research.schev.edu/gradrates/success\\_index.asp](http://research.schev.edu/gradrates/success_index.asp)

Note: Gap may not equal the difference in rates from traditional and underrepresented students due to rounding.

### Success and Completion Rates Public 2- year Institutions



Source: [http://research.schev.edu/gradrates/success\\_index.asp](http://research.schev.edu/gradrates/success_index.asp)

Note: Gap may not equal the difference in rates from traditional and underrepresented students due to rounding.

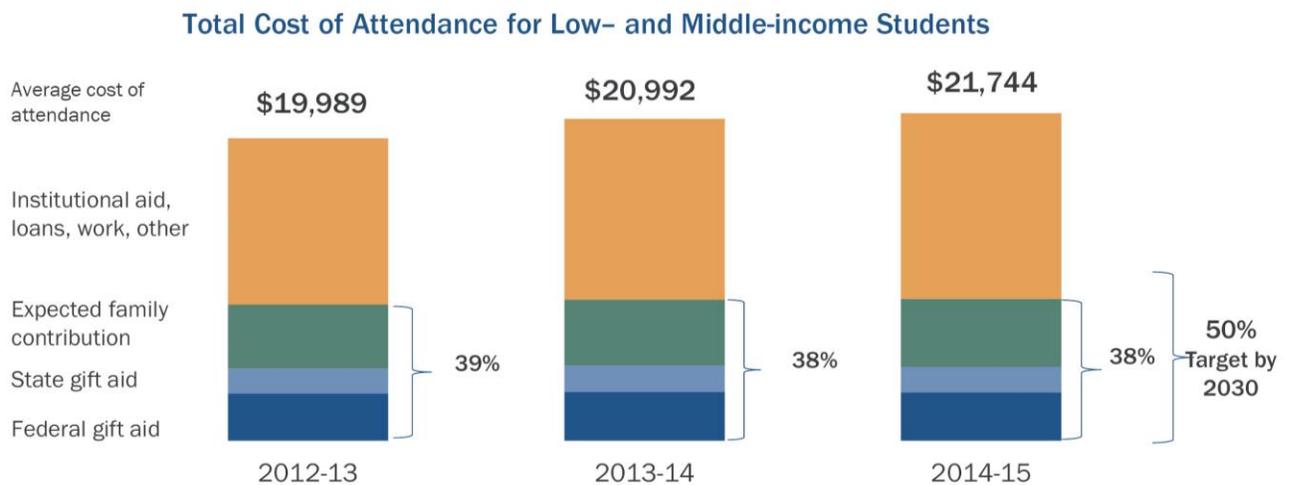
## Affordability

*Meet half of the cost of attendance for low- and middle-income students through expected family contribution and state and federal grant aid by 2030*

In order to maintain affordability and accessibility to higher education, the costs to attend college must be achievable — particularly for low- and middle-income students and families. The cost of attendance includes all related expenses, including tuition and fees, room and board, books and supplies, transportation and personal costs.

Affordability is influenced by several interrelated factors, including cost of attendance, state and federal financial aid, state support, and family financial circumstances. All parties — institutions, state and federal government and parents and students — contribute to making a college education affordable. The affordability measure attempts to include the many dimensions of affordability.

Between 2012-13 and 2014-15, the total cost of attendance increased by \$1,755 per student, or 8.7%. Amounts contributed by families, state gift aid and federal gift aid also increased. The net effect of these changes is that the percentage of costs met through expected family contribution, state gift aid and federal gift aid has remained relatively flat over the last three years at 38%-39%. The Virginia Plan’s target is for that share to reach 50% by 2030. That target can be reached through institutional efforts to minimize cost increases, state and federal support for institutions and students, and contributions from families and students.



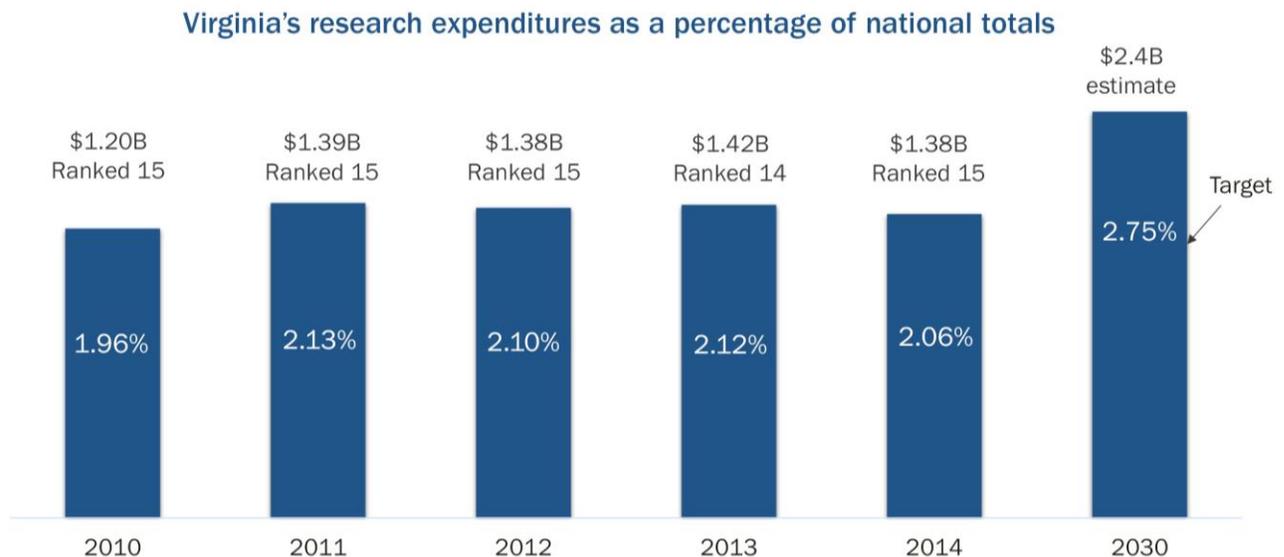
## Research

*Increase Virginia's research expenditures as a percentage of national totals by 30% by 2030*

Increases in academic research and development have meaningful consequences for the health and well-being of states' citizens and economies. Public investment in research at colleges and universities spurs development of scientific and medical discoveries, new medicines and treatments, and all types of innovations and inventions, which lead to patents, licenses and the commercialization of results.

While federal funding for research has remained relatively flat in recent years, this goal focuses on increasing the total share of research funding compared to other states. In federal fiscal year 2014, Virginia ranked 14th nationally in annual expenditures on research and development in higher education; this position has remained relatively unchanged since the mid-2000s even as the total dollar amount has doubled. The Commonwealth's total share of expenditures compared to national total was 2.05%. The target is to increase this share to 2.75% by 2030.

The National Science Foundation annually updates data reported by institutions on all research expenditures (federal, state, private, institution, etc.). This information is available at <http://www.nsf.gov/statistics/herd/>.



Source: National Science Foundation report on expenditures on research as reported by institutions for all funding sources (federal, state, private,) <http://www.nsf.gov/statistics/herd/>

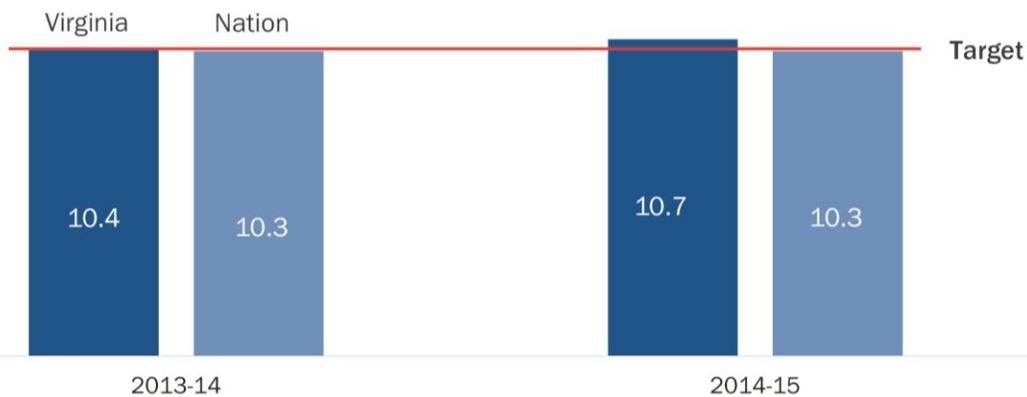
## Price

*Keep undergraduate net tuition and fees as a percentage of family income lower than the national average and less than 10% of low- and middle-income students*

Keeping undergraduate tuition and fees affordable for all families provides greater access to higher education. Measuring how Virginia compares as a percentage of the national average and based on low- and middle-income students allows the Commonwealth to track how tuition and fees may impact potential students and families. It also recognizes that Virginia families, on average, have higher incomes and can afford higher-than-average tuition and fees.

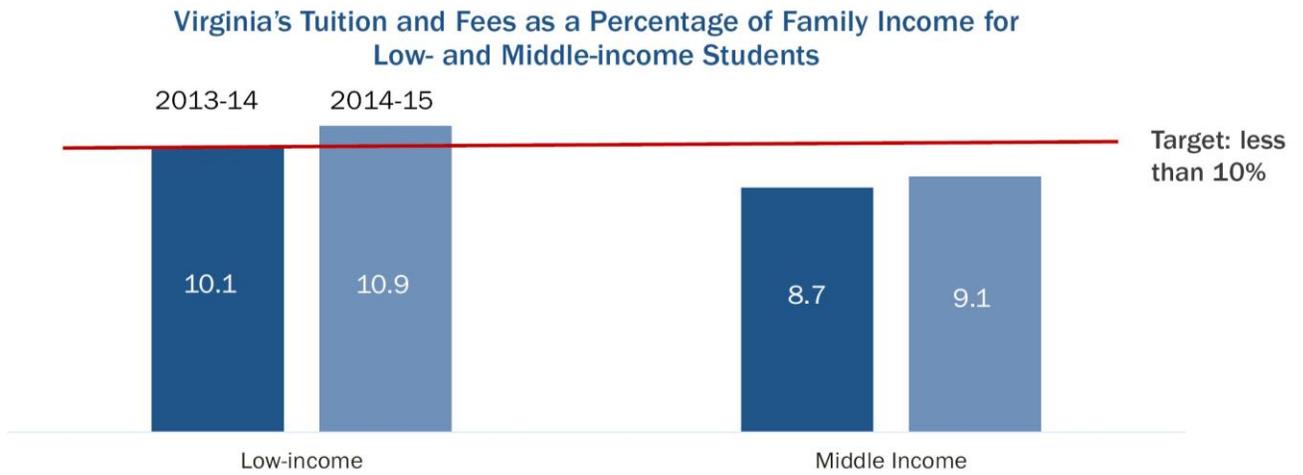
In 2014-15, Virginia’s percentage of family income for in-state undergraduate tuition and fees was 10.7% compared to the national average of 10.3%. The percentage of income needed to cover tuition and fees increased 0.3 percentage points from 10.4 over the prior year.

Virginia’s Tuition and Fees as a Percentage of Family Income  
Compared to the National Average



Source: SCHEV staff analysis of in-state, four-year undergraduate tuition and fees as a percentage of average income.

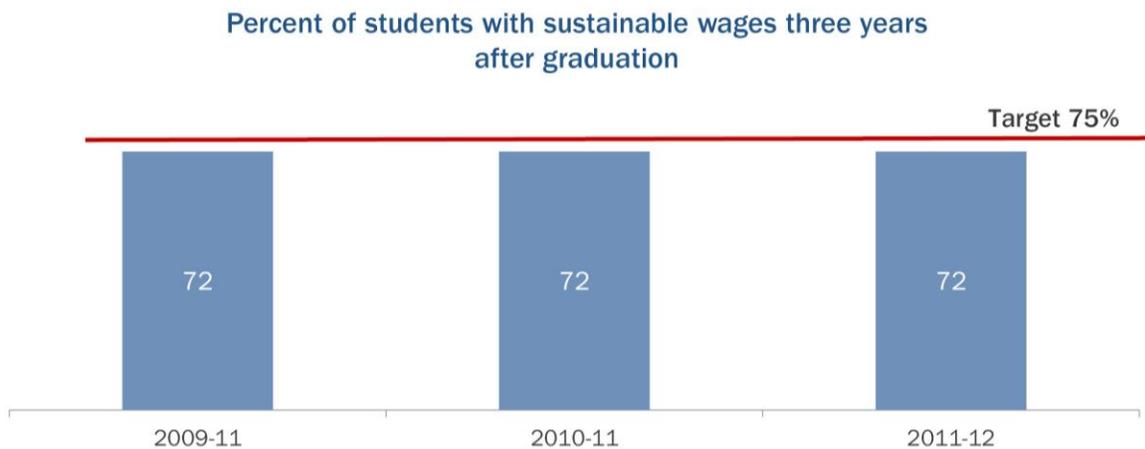
The impact of tuition and fees is greater for individuals who are low-income. The percentage of family income needed for in-state tuition and fees net of Pell grants from the federal government grew from 2013-14 to 2014-15 by 0.8 percentage points from 10.1% to 10.9% — both above the target of less than 10%. For middle-income families, the impact is less. While the percentage also grew from 8.7% in 2013-14 to 9.1% in 2014-15, it remains below the target of 10%.



Source: SCHEV staff analysis of in-state, four-year undergraduate tuition and fees, net Pell grants as a percentage of average income.

## Economic Returns

*Ensure that 75% of graduates earn sustainable wages three years after graduation*



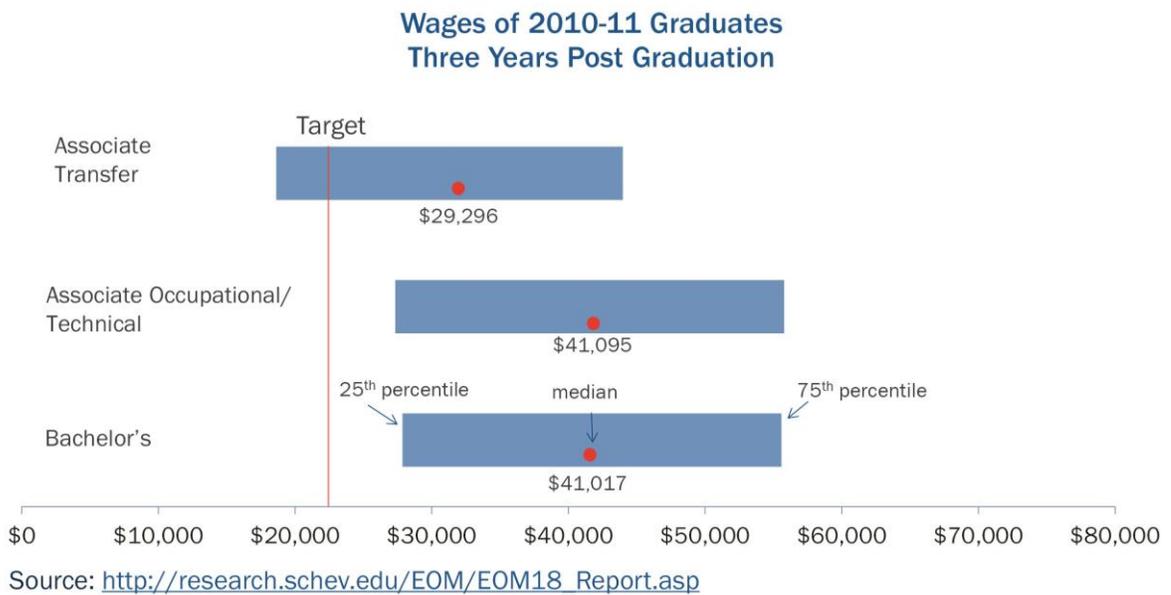
Source: <http://research.schev.edu/eom/strategicplan5.asp>

Note: Sustainable wages are estimated at 200% of the federal poverty level for a single family member or approximately \$23,700 annually

While attaining a credential has been shown to improve an individual's earning over his/her lifetime, an important aspect of higher education is to ensure that graduates earn sustainable wages. This amount is currently based on earnings at or above 200% of the federal poverty level. For a single-member household this is estimated to be \$23,700 per year. Approximately 72% of graduates in 2010-11 earned sustainable wages three

years after graduation. This estimate includes all graduates of associate and bachelor's degree programs.

While graduates from all degrees are impacted by the sustainable wages, the largest group falling below this average is for associate transfer students with median wages significantly less than the associate occupational/technical degree and the bachelor's degree. Associate transfer degrees tend to have low wages in the first five years upon completion, yet at 10 years post-completion they are equivalent to associate occupational/technical degrees and nearly equivalent to bachelor's earnings 20 years post-graduation. Furthermore, earnings are also impacted by major and not just degree: Some occupations have a larger earnings premium compared to others. For example, engineering majors have higher median earnings than those majoring in teaching.



## Findings and Considerations

In 2015, the General Assembly endorsed The Virginia Plan for Higher Education to support economic and cultural prosperity for the Commonwealth, its regions and its citizens. With the objective of becoming the best-educated state by 2030, The Virginia Plan is intended to provide a framework for achieving this objective through goals, initiatives and measures of progress. After its first full year of implementation, the

following includes a brief overview of the findings based on analysis of initiatives and measures from 2016 that support The Virginia Plan and considerations for 2017.

## Findings for 2016

- **Virginia ranked sixth compared to other states** based on the percentage of working-age population (ages 26-64) with a degree or workforce credential—a key measure in the Commonwealth’s objective to be best-educated state.
- While this ranking is high, **Virginia’s 25-to-34-year-old population ranks lower**, at 11th nationally, in the percentage of those holding an associate degree or greater. This indicates that other states are increasing their focus on improving their education attainment rates and that the Commonwealth should continue to support access and completion of postsecondary education.
- Demand for postsecondary education continues to grow post-recession. According to Georgetown Center for Education and Workforce, **99% of the new jobs since the great recession required some postsecondary education.**
- Virginia’s public and private nonprofit institutions **awarded 119,934 degrees and certificates in 2015-16 — a record high compared** to 115,577 in the previous year. (As a note, for-profit institutions also award degrees and certificates in Virginia, but SCHEV currently does not have student-level data to provide additional analysis.)
- While awards were high and completion rates have increased over the last several years, **gaps remain in attainment and completion rates for underrepresented populations** — those who are low-income, minority race, age 25 and older, or from areas of the state with low educational attainment rates.
- **Affordability of higher education remains a concern.** It is impacted by the rising cost of attendance (expenses including tuition and fees, room and board, transportation, books and supplies, and personal costs), state support, the availability of state and federal financial aid, and the ability of students and families to contribute to the cost of education.
- In addition to affordability, **debt continues to grow but remains similar to the national average.** Median debt in Virginia remains under \$15,000 for an associate degree and \$30,000 for a bachelor’s degree. Fifty-nine percent of associate students and 37% of bachelor’s students graduate with no debt.
- **General Assembly and governor support for higher education in the 2016 session** resulted in an investment of over \$316 million, **leading to the lowest tuition increases in 15 years.** Furthermore, investments in industry certifications and state licensures in high-demand occupations through the New Economy

Workforce Credential Grant in 2016 can help grow Virginia's economy while increasing the wages and educational attainment levels for those with only a high school degree or some college but no degree. Recently announced **budget reductions will make more daunting Virginia's progress on its higher-education goals.**

- **Research expenditures** in the Commonwealth as a percentage of total U.S. research expenditures have **remained flat over the last several years. New investments in research and infrastructure** by the General Assembly through the formation of the Virginia Research Investment Committee and Fund and increases in research equipment through the higher education equipment trust fund **can enhance research** through the development of infrastructure among and across institutions.

### Considerations for 2017

In fall of 2016, SCHEV council members reviewed the findings above and recommended a continued focus on six key priority initiatives to support efforts to achieve the best-educated state status. A brief summary of these priority initiative recommendations includes the following:

- **Support programs that increase successful transitions to postsecondary education and increase completion rates** by coordinating the development and implementation of programs that align resources from pre-K-12, colleges, universities and other public sources to ensure affordable, efficient and effective pathways for students in all parts of the state.

The Commonwealth can expand and promote new and existing programs that offer early college credit while in high school and that utilize 2+2 (two years associate plus two years bachelor's degree) transfer options. Virginia has many successful programs that offer early college credit through dual enrollment and exams for college credit and has guaranteed admissions agreements between community colleges and over 20 public and private institutions across Virginia. In addition, supporting pathways that assist underrepresented populations (low-income, minority race and ethnicity, those over the age of 25 and from areas of the state with the lowest educational attainment rates) will help close the gaps in educational attainment and completion rates.

Partnerships between secondary and postsecondary education and among higher education institutions also build greater opportunities to identify

innovative strategies to support a continuum of education for all students. Efforts such as the Affordable Pathways Partnership grants, funded during the 2016 General Assembly session through the Fund for Excellence and Innovation, and Virginia's partnerships with Lumina Foundation and Complete College America can support education systems that work to increase access and completion for students.

In addition, providing support for attainment of high-demand credentials through noncredit training, including the New Economy Workforce Credential grant funded during the 2016 General Assembly session, will promote greater opportunities for individuals to obtain jobs with sustainable wages and help grow Virginia's economy.

- **Identify funding strategies** by seeking legislative changes that support stable and sustainable public funding for higher education, such as a constitutional amendment, a dedicated funding source and a revenue-stabilization fund.

While the state's additional investment of over \$313 million in higher education during the 2016 General Assembly session helped keep tuition increases at their lowest in the last 15 years, the state's recent revenue shortfall led to cuts to higher education, making it more difficult for students and families to appropriately plan and afford the costs of education and for institutions to ensure that students receive a high-quality education. Identifying strategies that will support sustainable funding can promote greater trust in Virginia's higher education system for students, parents and the public.

- **Implement and support greater efficiencies** by reviewing and recommending potential initiatives for further restructuring and shared services that enhance institutional and administrative flexibility and improve quality and efficiency.

In addition to state investment, institutions must continue to seek opportunities for greater efficiencies that reduce or maintain the cost of education. Many institutions have become more efficient by using shared services and implementing administrative cost-savings strategies. In addition, some institutions have identified strategies that provide direct savings to students, such as the use of free textbooks and resources. Efforts to support and promote these activities can also help make higher education affordable. The recent

investment by the governor and General Assembly through the Fund for Excellence and Innovation is designed to identify and support such efforts.

- **Ensure quality in education** by collaborating with institutions to measure the quality of undergraduate education, including civic engagement of graduates and relevance to high-demand occupations across regions of the state.

The Virginia Plan seeks to place the Commonwealth as the best-educated state through increased educational attainment. It also must ensure that Virginia higher education maintains the quality expected of its students and businesses that employ its graduates. Virginia has joined a national effort to improve its method of measuring quality in the core areas of written communication, quantitative reasoning and critical thinking. Supporting this effort and other measures of quality will promote the value of higher education.

In addition, the Virginia Board for Workforce Development is working with national partners to develop a supply/demand dashboard to identify skills and labor shortages. This information combined with regional and state partnerships with education providers, economic developers and the business community can help align skills needs and close the gaps in high-demand occupations.

- **Increase communications to improve public knowledge of the value of higher education** by implementing communications strategies through traditional media, social media and other means.

Over the past year, SCHEV staff and partners have worked to build infrastructure to support increased communications on the value of higher education to three primary audiences: (1) students and parents, (2) business and economic development and (3) the general public and policy makers. Increasing these efforts to these audiences of messages that focus on primary areas of access, completion, quality, economic development, research and higher education outcomes will help support greater awareness to help achieve the state's objective of becoming the best-educated state.

- **Support research and economic development** by implementing a long-term plan that supports recruitment and retention of research faculty, provides

matches to federal and private research grants and enhances commercialization of higher education research.

The General Assembly's recent investment in research through the Higher Education Equipment Trust Fund and the Virginia Research Investment Fund and the establishment of the Virginia Research Investment Committee supports opportunities to grow and expand research. Increased investment and development of infrastructure to support greater research collaborations among and across institutions will help support the development of new technologies, attract and retain quality faculty, establish businesses and create new jobs. This will help grow and diversify the state's economy while supporting quality in higher education.

## Appendix A: Updates on Initiatives and Activities from 2016

In an effort to prioritize approaches to improve educational attainment across the Commonwealth, the council identified six priority initiatives for SCHEV staff to lead or coordinate in 2016. These areas focused on (1) pathways programs, (2) sustainable funding, (3) efficiencies and shared services, (4) quality in education, (5) communications and (6) research and economic development. The following is a summary of select activities related to the initiatives in 2016.

**Pathways Programs:** Coordinate the development and implementation of programs that align resources from pre-K-12, colleges, universities and other public sources to ensure affordable, efficient and effective pathways for students in all parts of the state.

- *Improved transparency of exams for college credit:* Aligned with a request through the General Assembly, SCHEV staff coordinated with institutions and policy makers to approve a policy that established requirements for acceptance of course credit for exams that: maximizes students ability to earn college credit; enhances the transparency for students to seek credit for prior learning, contributes to lower costs for students and families by enhancing the ability for students to complete a degree in a timely manner; and supports quality in undergraduate education.
- *Identified opportunities to improve pathways for student transfer by updating the State Policy on Transfer and joining the interstate passport initiative:* Council approved an updated transfer policy in 2016 and joined a national initiative to focus on improving the portability of general education courses. Improving the portability of courses can improve pathways for many individuals as current data indicate that 37% of students transfer between institutions and up to 17% of students in Virginia transfer across state lines.
- *Supported the math pathways project to improve remediation, completion and transfer rates:* Initiated by the community-college system, the math pathways project began in 2016 and is focused on improving math courses by reducing the number of courses offered to increase the transferability of courses among two- and four-year institutions and supporting lower remediation rates through co-requisite remediation.
- *Created a workgroup to review the efficiency and quality of dual enrollment to support student success:* The workgroup was formed in partnership with the Secretary of

Education's office and will work to identify methods to improve quality, transferability and communications to students of the value of these courses to support affordable pathways.

- *Supported College Access, Success and Completion efforts through awareness activities:* SCHEV staff, in partnership with the Governor's office, the Lumina Foundation and Complete College America, hosted a summit with institutions, policymakers and pre-K-12 leaders focused on state and national trends related to college access and completion. The summit included over 280 participants. In addition, governor's office met with college presidents to identify opportunities to increase access and success for students.
- *Funded Affordable Pathways and K-12 Partnership Initiatives:* Secured funding to support affordable pathways and pre-K-12 partnerships through the Fund for Excellence and Innovation and issued five grants, which are expected to save the first cohort of students over \$4.2 million — an average of \$10,000 per student for those who complete the program.
- *Launched grants to support affordable access to industry credential training:* Through funding from the General Assembly, the New Economy Workforce Credential Grant program provides training opportunities in high-demand fields to individuals at only one-third the cost of the program for those who complete the training.

**Sustainable Funding:** Seek legislative changes that support stable and sustainable public funding for higher education such as a constitutional amendment, a dedicated funding source and a revenue-stabilization fund.

- *Aligned an approved budget recommendations with the goals of The Virginia Plan:* The council approved budget recommendations for the 2016 session focused on the goals of access, success, improvement and investment and prosperity.
- *Helped secure funding increase and support of priority initiatives:* During the session, staff worked with the governor's office and General Assembly members and staff to support higher education initiatives. The 2016 General Assembly approved over \$313 million in new funding for higher education.
- *Released the 2016-17 Tuition and Fees Report and highlighted the low tuition increases resulting from increased General Assembly investment.* In addition to a detailed analysis of the tuition and fee charges approved by the institutional boards of visitors for 2016-17, the report states that the relationship between general fund investment in public higher education and lower tuition increases is well documented.

**Efficiencies and Shared Services:** Review and recommend potential initiatives for further restructuring and shared services that enhance institutional and administrative flexibility and improve quality and efficiency.

- *Proposed and received funding to establish the Fund for Excellence and Innovation:* The fund focuses on supporting affordable pathways, cost efficiencies and shared services.
- *Established a workgroup to identify cost efficiency and shared services opportunities:* Institutions have met regularly to identify opportunities for collaboration and share promising practices on cost efficiencies. The group identified two projects for future development but also will host a summit to share practices across the larger education community for consideration and adoption.

**Quality in Education:** Collaborate with institutions to measure the quality of undergraduate education, including civic engagement of graduates and relevance to demand occupations across regions of the state.

- *Joined a national initiative to identify how well students are achieving learning outcomes:* Virginia joined the Multi-State Collaborative supported by the State Higher Education Executive Officers Association and the Association of American Colleges and Universities. This initiative is designed to apply common rubrics to college work through projects, papers and research. These rubrics can then be used by faculty and can be aggregated across institutions and states to better assess the quality of education.
- *Formed a taskforce to revise SCHEV assessment guidelines to include quality and civic engagement:* Based on the work of the multistate collaborative and other efforts, the taskforce of institutions will provide input into the revised assessment guidelines expected to be completed in spring 2017.
- *Formed a “Learning Improvement” initiative to support faculty in improving teaching and learning:* The initiative seeks to provide support to faculty regarding student learning assessment results.
- *Collaborated with the governor’s office to develop supply/demand dashboards to support identification of demand occupations:* Through funding from the National Governors Association and USA Funds, the governor’s office plans to develop dashboards that can be used to identify gaps in demand and supply for certain occupations.

**Communications:** Launch a communications strategy to address public knowledge and benefits of higher education, through council reports, traditional media, social media and other means.

- *Identified common themes for messaging the value of higher education:* SCHEV staff held a brainstorming session with 30 stakeholders to identify a common message and theme for Virginia higher education.
- *Initiated a communications group with the institutions:* Communications staff from across the institutions convened to help identify and implement communications strategies to support messaging for higher education.
- *Raised awareness of issues impacting higher education in Virginia:* Launched a new website, initiated a weekly newsletter, conducted editorial-board visits with major newspapers in Virginia, and developed a Virginia Plan update that was circulated to policy makers and institution officials.

**Research and Economic Development:** Promote economic development for the Commonwealth by implementing a long-term plan that supports recruitment and retention of research faculty, provides matches to federal and private research grants and enhances commercialization of higher education research.

- *Recommended funding to support research:* The council recommended funding for research and SCHEV staff worked with the governor's office and General Assembly members during the session to support funding for research activities. The Assembly appropriated nearly \$80 million in research-related funding for FY 2017 and 2018.
- *Assigned SCHEV director as chair of the Virginia Research Investment Committee:* To facilitate the distribution of research funding from the newly established Virginia Research Investment Fund, the SCHEV director was named to chair the committee and provide staffing support.
- *Designated SCHEV as the lead support for administration of the Virginia Research Investment Fund:* In addition to chairing the Investment Committee, SCHEV staff members are assigned to support the administration of the Fund established to distribute \$22 million over FY 2017 and FY 2018.

## Appendix B: Related Indicators

In addition the main measures and targets provided in the preceding section, SCHEV also developed related leading indicators to further identify trends that may impact measures and targets and Virginia's objective to be the best-educated state.

These indicators include:

1. Enrollments
2. Remediation
3. Persistence and retention
4. Average-time-degree
5. Student debt
6. Loan default rates
7. Other indicators of economic and cultural prosperity
8. Wages (long-term)

### Enrollments

Changes in enrollment can identify potential barriers to access and impact award outcomes if other factors such as retention and completion remain constant. Since 2009 (the start of the great recession), the rate of growth slowed for all institutions and declined in more recent years for community colleges.

<b>Enrollments</b>								
<b>10-year Change in Undergraduate Enrollment by Institution Type</b>								
	<b>Total</b>		<b>Public 4-year</b>		<b>Public 2-year</b>		<b>Private 4-year</b>	
<b>Fall Term</b>	<b>Enrollment</b>	<b>Annual Change</b>	<b>Enrollment</b>	<b>Annual Change</b>	<b>Enrollment</b>	<b>Annual Change</b>	<b>Enrollment</b>	<b>Annual Change</b>
2005	349,142		144,770		154,969		49,403	
2006	360,438	3.2%	147,110	1.6%	160,570	3.6%	52,758	6.8%
2007	376,821	4.5%	150,889	2.6%	168,566	5.0%	57,366	8.7%
2008	392,663	4.2%	155,177	2.8%	177,121	5.1%	60,365	5.2%
2009	417,851	6.4%	158,833	2.4%	190,852	7.8%	68,166	12.9%
2010	432,793	3.6%	161,417	1.6%	197,004	3.2%	74,372	9.1%
2011	444,723	2.8%	164,460	1.9%	198,850	0.9%	81,413	9.5%
2012	447,242	0.6%	166,722	1.4%	194,435	-2.2%	86,085	5.7%
2013	445,111	-0.5%	168,239	0.9%	190,528	-2.0%	86,344	0.3%
2014	442,293	-0.6%	169,119	0.5%	184,971	-2.9%	88,203	2.2%
2015	438,190	-0.9%	170,590	0.9%	179,064	-3.2%	88,536	0.4%

Source: [http://research.schev.edu/enrollment/E2\\_Report.asp](http://research.schev.edu/enrollment/E2_Report.asp)

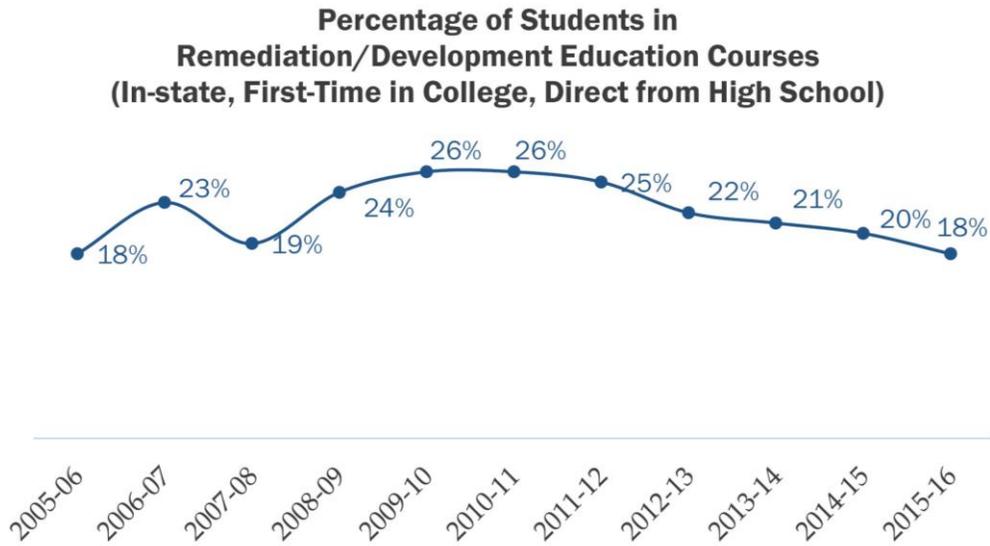
These data partly correlate to the low growth in the number of high-school graduates in a similar time period. This growth is expected to remain relatively flat over the next eight-10 years.

High School Graduates in Virginia Actual and Estimated (20015-06 to 2021-22)				
Year	Grand Total	Private Schools	Public Schools	Annual Change
2005-06	76,992	7,395	69,597	
2006-07	80,910	6,913	73,997	5.1%
2007-08	84,625	7,256	77,369	4.6%
2008-09	86,162	6,511	79,651	1.8%
2009-10	88,003	6,492	81,511	2.1%
2010-11	89,297	6,402	82,895	1.5%
2011-12*	89,956	6,620	83,336	0.7%
2012-13*	89,890	6,611	83,279	-0.1%
2013-14*	88,589	6,099	82,490	-1.4%
2014-15*	87,856	5,935	81,921	-0.8%
2015-16*	88,707	5,848	82,859	1.0%
2016-17*	87,930	5,570	82,360	-0.9%
2017-18*	90,456	5,494	84,962	2.9%
2018-19*	90,213	5,203	85,010	-0.3%
2019-20*	89,790	4,935	84,855	-0.5%
2020-21*	89,657	4,772	84,885	-0.1%
2021-22*	91,059	4,595	86,465	1.6%
*Estimated				
Notes: School Year refers to the K-12 calendar running fall to spring and may include graduates from any point in that school year, including the summer after the year end. Private Schools Total includes schools not supported primarily by public funds, religious and nonsectarian, but not including homeschool students. See Appendix C Technical Information and Methodology at <a href="http://www.wiche.edu/knocking">www.wiche.edu/knocking</a> .				
Source: Western Interstate Commission for Higher Education, Knocking at the College Door: Projections of High School Graduates, 2016.				

## Remediation

In Virginia, enrollment in remediation courses is primarily at the community-college level. Since 2009-10 the percent of first-time in college, in-state students enrolling directly from high school has decreased. Over a similar time period, Virginia’s community colleges have worked to reduce remediation rates through improved methods of testing and greater engagement with the high-school population through programs such as high-school coaches. In addition, high schools have worked to

improve the college readiness of individuals through adjustments in curriculum requirements, including changes to graduation requirements.



### Persistence and Retention

A leading indicator of completion and success rates is student persistence, primarily in the first to second year. Over the past six years, retention rates have increased but the gaps between the underrepresented student and traditional students (non-URP) persists, similar to gaps in completion rates.

	Subcohort	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Public 4-year	Under-represented Population (URP)	82%	82%	83%	84%	84%	84%
	Traditional (non-URP)	87%	87%	88%	89%	89%	89%
Public 2-year	Under-represented Population (URP)	52%	49%	53%	52%	49%	50%
	Traditional (non-URP)	55%	53%	56%	56%	55%	57%

Note: Full-time, first-time in college and new transfer students  
 Source: [http://research.schev.edu/enrollment/DistUnder\\_RepPop.asp](http://research.schev.edu/enrollment/DistUnder_RepPop.asp)

## Average Time-to-Degree

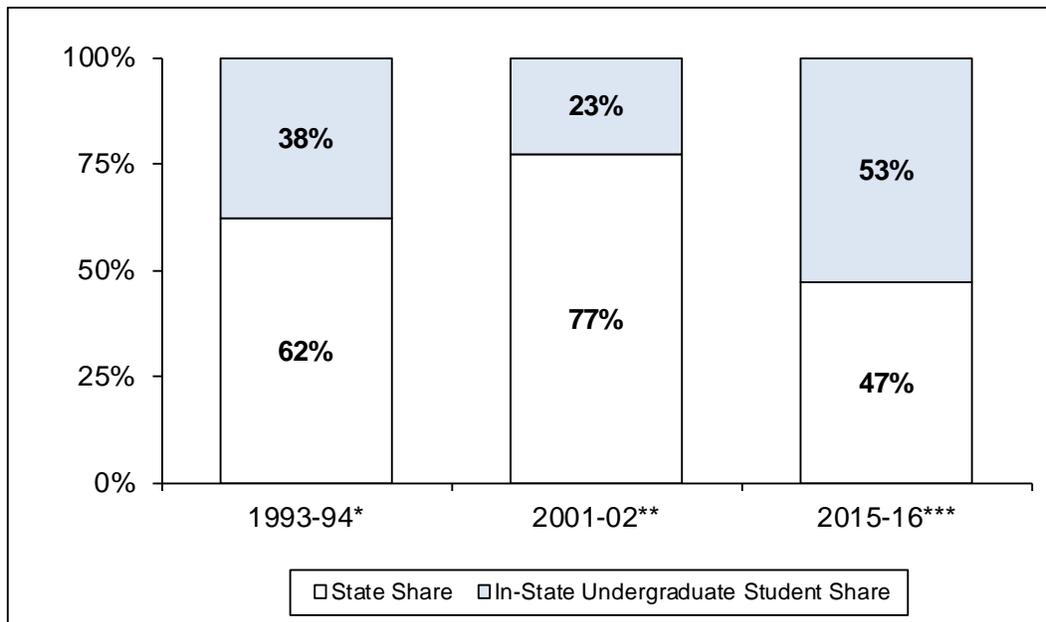
Affordability for students can be impacted by how long it takes a student to receive a credential. Complete College America and institutions like VCU have calculated it can cost up to \$50,000 for each additional year for an individual to attend college (beyond two years for an associate degree and beyond four years for a bachelor’s degree). This calculation is based on the added cost of attendance plus lost wages. Currently, the average time-to-degree for public institutions is greater than the expected years to complete. Many institutions are working to reduce this average time and the average number of credits to complete a degree with strategies to help better guide students in course choices and majors to avoid needing to take additional courses to meet degree requirements.

<b>Average Time-to-Degree, Public Institutions</b>		
	<b>Ave. Time-to-Degree (Elapsed Years)</b>	<b>Ave. Credits-to-Degree</b>
<b>Public two-year colleges</b>		
First time in college, Full-Time at Entry	3.9	112
First time in college, Part-Time at Entry	6.4	92
First time in college, Full-Time at Entry, Dual Enrollment Credit	2.9	110
<b>Public four-year colleges</b>		
First time in college, Full-Time at Entry	4.5	135
First time in college, Part-Time at Entry	6.5	122
First time in college, Full-Time at Entry, Dual Enrollment Credit	4.4	146
Comparison with National Student Clearinghouse	5.6	
New Transfer, Full-Time at Entry	3.5	88
New Transfer, Part-Time at Entry	4.3	69
Source: Awards for 2015-16 <a href="http://schev.edu/index/reports/schev-reports/degree-and-certificate-completions">http://schev.edu/index/reports/schev-reports/degree-and-certificate-completions</a> <a href="http://research.schev.edu/gradrates/gradrate_scorecard.asp">http://research.schev.edu/gradrates/gradrate_scorecard.asp</a>		

## State Funding

State funding for higher education has important role in helping to reduce the cost of education for students in the form of tuition and fees. Over the last two decades, state support for higher education has decreased from a low of 77% of the share of education provided by the state in 2001-02 to 47% of the share provided by the state in 2015-16 based on SCHEV staff analysis of tuition and fees

(<http://schev.edu/index/reports/schev-reports/2016-17-tuition-and-fees-report>).



\*The tuition policy required out-of-state students to pay 100% of cost, but had no cost-share requirement for in-state undergraduate students. Calculation based on the average appropriated cost of education.

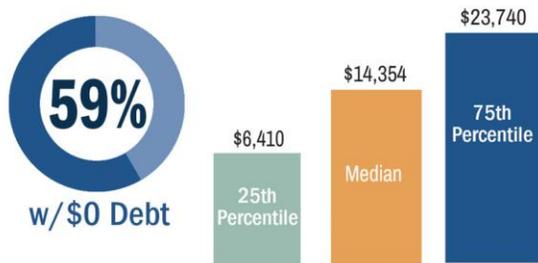
\*\*The goal of the tuition policy was for in-state undergraduate students to pay 25% of the cost. Calculation based on the average appropriated cost of education.

\*\*\*The goal of the tuition policy is for students to pay 33% of the cost. Calculation based on average guideline calculated cost of education.

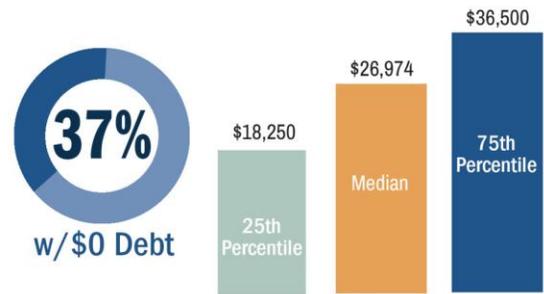
## Student Debt

Similar to national trends, total debt and the number of borrowers in Virginia has increased steadily over the last 20 years. However, many students graduate with no debt at all — 59% of associate degree and 37% of bachelor’s degree students had no debt upon graduation. The amount of debt one borrows and the borrower’s ability to pay back the debt is dependent on wage earnings after college. Earnings can vary by program area.

Virginia Student Debt, Associate Degree



Virginia Student Debt, Bachelor’s Degree

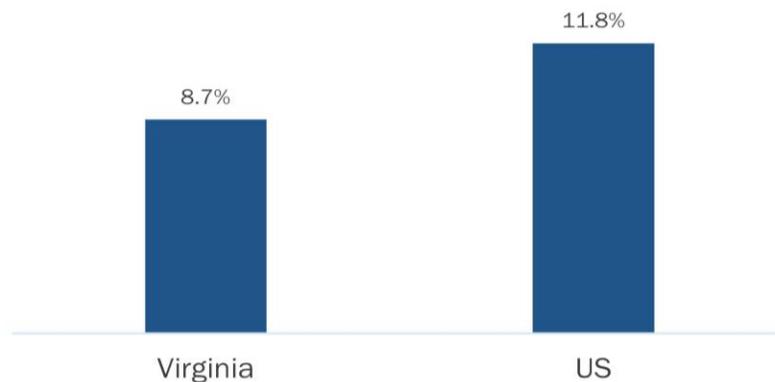


Source: SCHEV staff analysis of debt

## Student Loan Default Rates

In addition to student debt, monitoring default rates helps to ensure that students are able to repay their loans upon completion — or in some cases without completing. Currently, Virginia’s loan default rates are below the national average. In 2012, 8.7% of students were in default of their loans three years after entering repayment.

2012 Student Loan Default Rates



Source: <http://www2.ed.gov/offices/OSFAP/defaultmanagement/cdr.html>

## Other Indicators of Economic and Cultural Prosperity

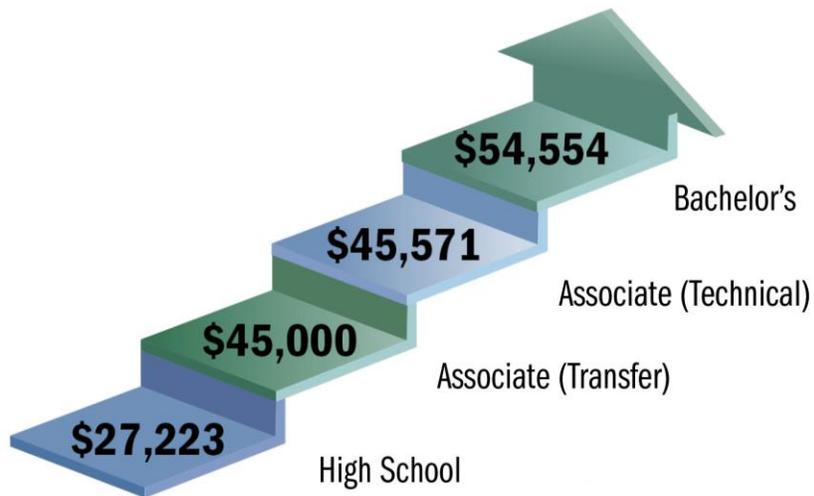
As mentioned, becoming the best-educated state will make the Commonwealth successful only if the economy and its citizens continue to grow and prosper. As a result, the council also set additional indicators to monitor to serve as leading indicators for the Commonwealth’s potential to meet its objective and as potential outcome indicators if the Virginia continues to grow its educational attainment rates. Over the last several years, Virginia has improved as a top state to live, make a living and raise a child, but has declined as a top state for business and for child well-being.

<b>Other Indicators of Economic and Cultural Prosperity</b>				
		<b>2014</b>	<b>2015</b>	<b>2016</b>
Top States to Live in (Quality of Life Score)	CNBC	#22	#25	#16
Top States for Business	CNBC	#8	#12	#13
Best States to Make a Living	Money-rates.com	#7	#4	#3
Best States for Business	Forbes	#4	#7	--
Best States to Raise a Child	Child Well-Being (Kids Count, AECF)	#9	#14	#11
	Chance for Success (EdWeek)	#9	#9	#8
	Quality Counts (EdWeek)	--	#12	#12
Sources: <a href="http://www.cnbc.com/id/101758236">http://www.cnbc.com/id/101758236</a> <a href="http://www.forbes.com/pictures/fjle45gefg/best-states-to-make-a-living/">http://www.forbes.com/pictures/fjle45gefg/best-states-to-make-a-living/</a> <a href="http://www.forbes.com/best-states-for-business/">http://www.forbes.com/best-states-for-business/</a> <a href="http://www.aecf.org/resources/the-2014-kids-count-data-book/#state-rankings">http://www.aecf.org/resources/the-2014-kids-count-data-book/#state-rankings</a> <a href="http://www.edweek.org/media/ew/qc/2014/shr/16shr.us.h33.pdf">http://www.edweek.org/media/ew/qc/2014/shr/16shr.us.h33.pdf</a>				

## Wages

After graduation, individuals with degrees experience better wage outcomes over time than those with high-school diplomas alone.

### Median Wages, 10 Years Post-Graduation



Sources: [http://research.schev.edu/EOM/EOM18\\_Report.asp](http://research.schev.edu/EOM/EOM18_Report.asp) for degree wages, U.S. Census Personal Income tables.