

SENATE OF VIRGINIA

Senate Finance Committee

Virginia's Student Pipeline to College and Career Success

November 21, 2013



SENATE FINANCE COMMITTEE

Higher Education in Virginia – A Snapshot

- Virginia's **public higher education** system is the 11th largest in the country based on enrollment. The system includes:
 - **15 four-year institutions;**
 - **23 community colleges with 40 campuses;**
 - **One two-year college;**
 - **Four regional higher education centers;**
 - **One institution focused mainly on research and graduate education; and**
 - **About 410,000 students.**
- Higher Education GF annual appropriations peaked in FY 2008 at almost \$1.9 billion.
- Current GF appropriations for FY 2014 are at \$1.7 billion, still about \$200 million below the peak, even after substantial investments in higher education over the past few years.



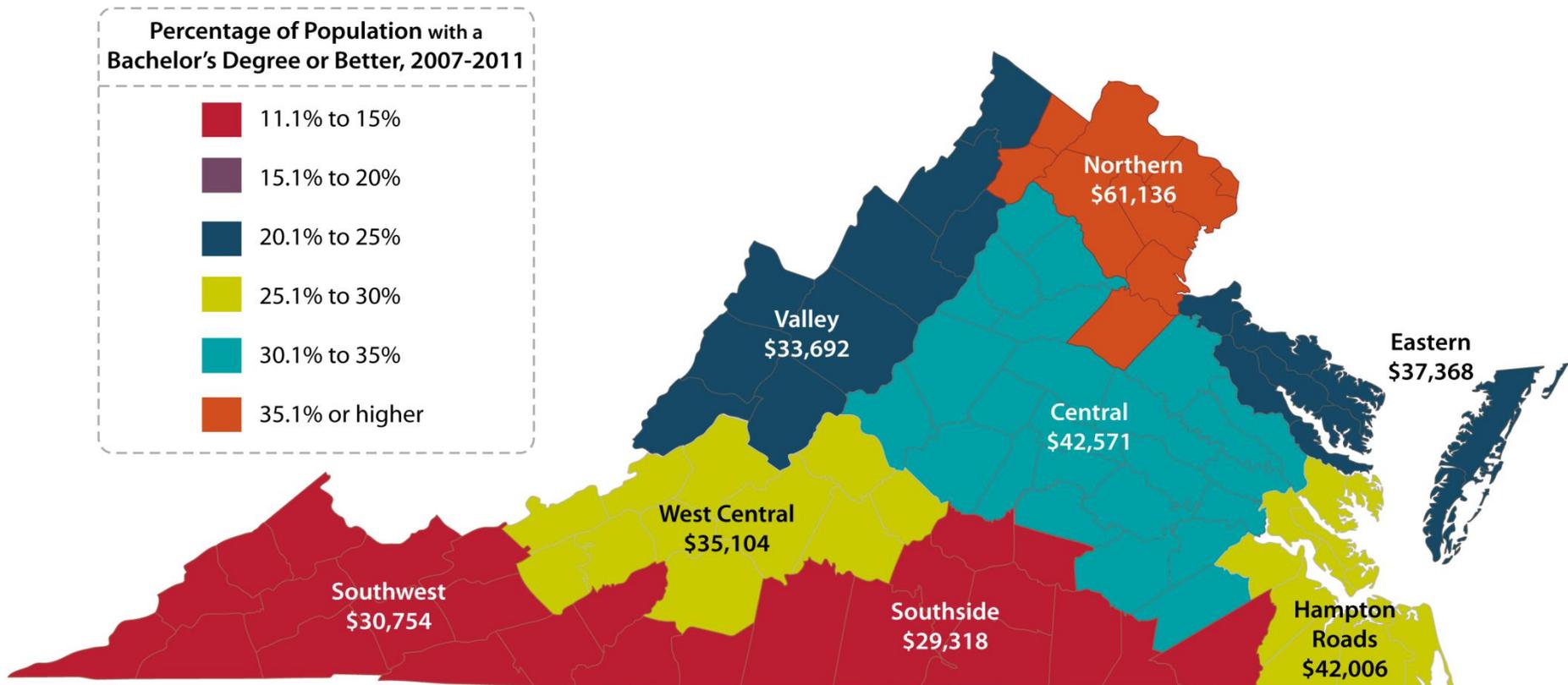
Why It Matters

- The educational pipeline must include enough individuals to produce sufficient degrees and industry certifications for our citizens to have a higher quality of life and strengthen the economy.
 - Competitiveness with other states and other nations in order to be successful in a global economy.
- To get through the pipeline, students must have the skills to be prepared to navigate the system successfully.
- Students must be able to afford some type of degree or certification.
- Once a student enrolls in a program, they must be retained and ultimately graduate, especially if they have incurred debt to attend school.
- Initiatives at each weak point in the pipeline can minimize loss and increase success.



Attainment Impacts Income

EDUCATIONAL ATTAINMENT AND PERSONAL INCOME, BY VIRGINIA REGION, 2011



Source: Council on Virginia's Future, 2013.



Virginia's Competitiveness is Tied to Educational Attainment

- Virginia has been impacted both positively and negatively concerning private business perceptions of our workforce on a regional basis.
- Example where workforce was an incentive to locate in Virginia:
 - ...Governor McDonnell announced that Red Sun Farms will establish its first U.S. location in Pulaski County, Va., to produce organic, greenhouse grown tomatoes. The \$30 million investment will create 205 new jobs over the next five years.
 - Virginia was able to successfully compete against Tennessee because Pulaski County offered the right mix of resources, including ideal climate conditions, a ready workforce, and a central location providing prime access to East Coast markets.
 - In addition, Pulaski County offers excess water capacity combined with very competitive electric rates. The region maintains its skilled workforce through access to 12 colleges and universities within a 60-mile radius, and provides a strong quality of life through two state parks, the Jefferson National Forest, and close proximity to the Appalachian Trail and Blue Ridge Parkway.

Source: Virginia Economic Development Partnership, November 2013.



Virginia's Competitiveness is Tied to Educational Attainment (continued)

- Example where workforce was an incentive to locate in Virginia:
 - Rolls-Royce located in Virginia based largely on the contributions related to higher education.
 - *The University of Virginia and Virginia Tech have combined as partners to offer the capabilities of both universities to Rolls-Royce in a coordinated and easy-to-access manner. Rolls-Royce will be able to gain access to faculty, students, research and education through CCAM (the Commonwealth Center for Advanced Manufacturing), which will be a single gateway center.*
 - *The overall combination of research talent, research programs, and educational activities will provide Rolls-Royce with access to the workforce and technology that it needs to develop and manufacture the next generation of aerospace engines.*
- Example where workforce was not an incentive to locate in Virginia:
 - *The project was a manufacturing and design firm interested in expanding their Virginia presence. ...[W]e understand they felt their needs were better met outside of Virginia, near other existing company facilities, based on the following:*
 - *Compared to alternatives, the skills needed for assembly and fabrication of wood, metals, and adhesives were not as prevalent.*
 - *Machine operators were also needed in the facility.*
 - *The depth of the labor force – quantity – may have been an issue.*

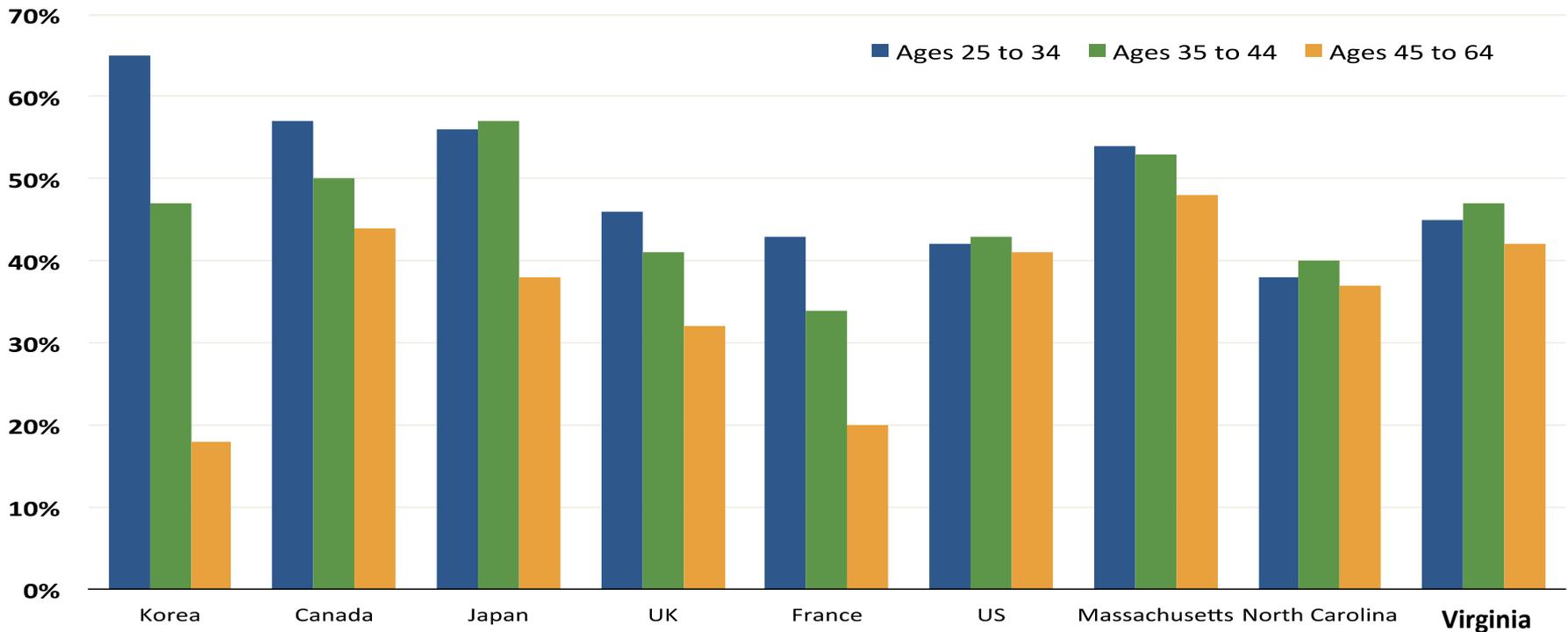


Younger Cohort Falling Behind

Global Competition: Where We Are Now

The educational attainment of young adults (ages 25 to 34) in Virginia is lower than the previous generation (ages 35 to 44) and behind a growing number of key competitors.

This situation will be exacerbated by a growing population of students who historically trail behind in high school and college graduation rates.



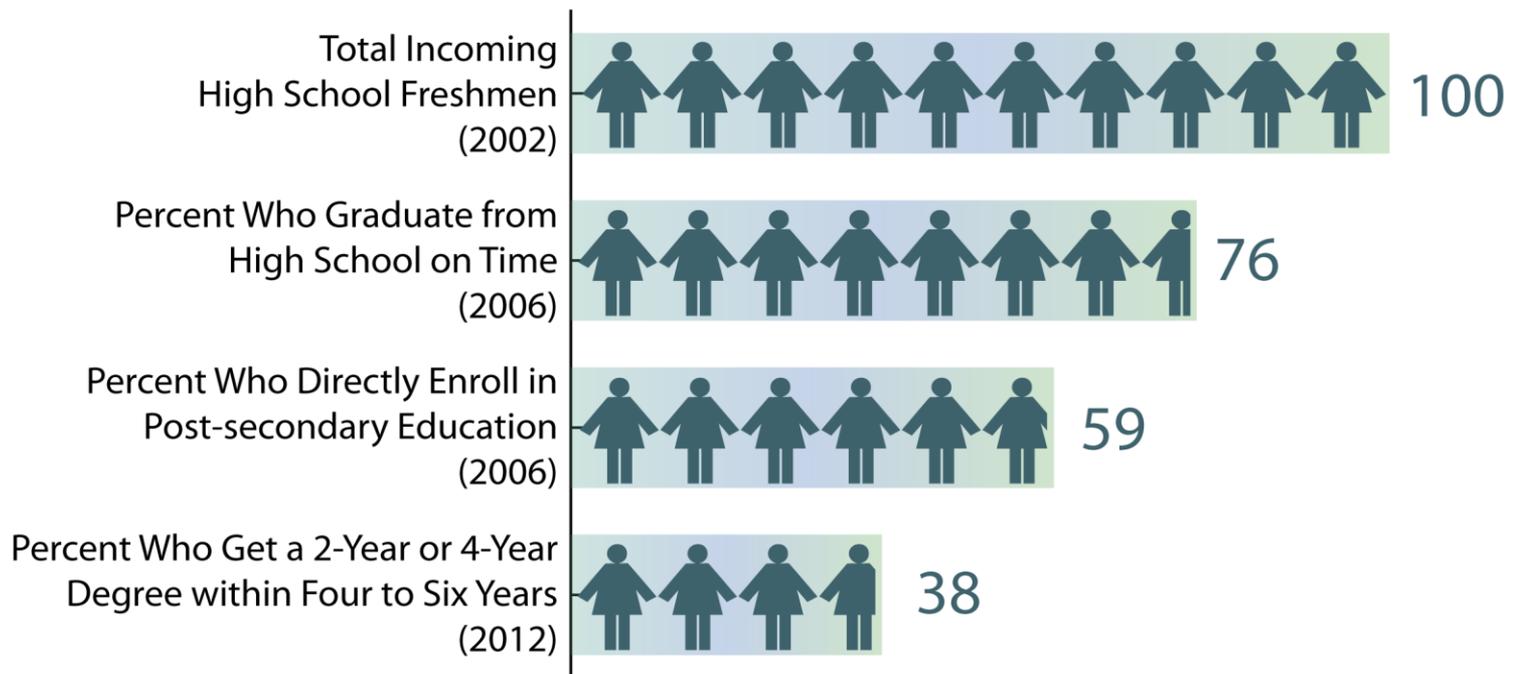
SOURCE: Country Data - Organisation for Economic Co-operation and Development, Education at a Glance, 2012 State Data - American Community Survey, US Census Bureau, 2009-2011 Virginia Data - American Community Survey, US Census Bureau, 2009-2011, Council on Virginia's Future, 2013.



Where We Lose Students

Educational Attrition in Virginia:

The High School – College Pipeline (2012)



DATA NOTES:

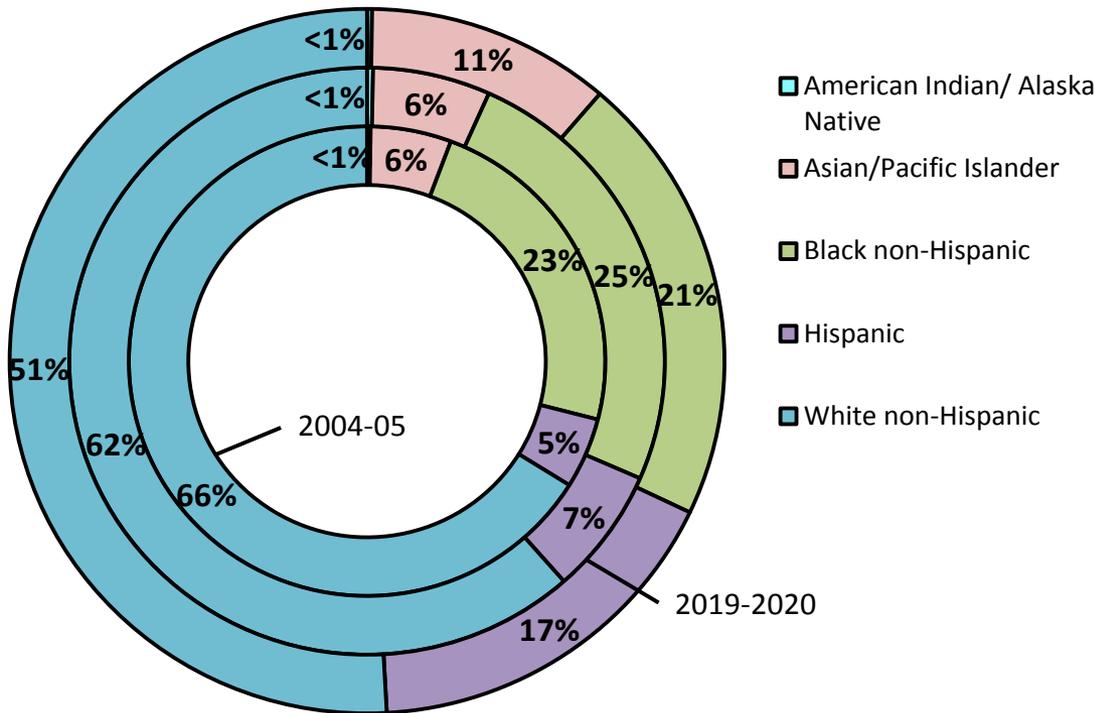
Data from the Virginia Department of Education (VDOE) and the State Council for Higher Education in Virginia (SCHEV).
Data does not reflect a uniform cohort and is not strictly longitudinal.

Source: Council on Virginia's Future, 2013



Changing Composition of High School Graduates: Where We Are Headed

Virginia Public High School Graduates by Race/Ethnicity
2004-05 (Actual), 2009-10 and 2019-2020 (Projected)



Western Interstate Commission for Higher Education (WICHE), *Knocking at the College Door*, Data Files and Summaries, March 2008.

Virginia 2013 High School Dropout Rates:

Black: 8.7%
 Hispanic: 11.7%
 White: 4.0%
 Asian: 3.2%
 American Indian: 9.0%
 Native Hawaiian: 4.1%
 Two or more races: 3.9%

Virginia Institution of Higher Education Enrollment Rates 2012:

Black: 55%
 Hispanic: 51%
 White: 68%
 Asian: 78%
 American Indian: 55%
 Native Hawaiian: 56%
 Two or more races: 66%

Source: VA DOE data, 2013.



Virginia is Focused on Student Pipeline Challenges and Educational Success

- Virginia's higher education institutions will have to increase college participation in these populations to maintain the current standard of living and to compete globally.
 - Virginia will also have to address regional variations that exist related to educational attainment.
- If not, projections suggest an increase in the percentage of people without high school diplomas and college degrees, which may lead to a decline in personal per capita income.
- Virginia supports many programs that address getting students, including underrepresented students, into college.



National and Local Groups Focus on P-16 Educational Success

College Board created a Commission to study the pipeline as a single continuum with the goal of at least 55% of Americans holding a postsecondary degree by 2025. Recommendations include:

- Preschool
- Middle and High School Counseling
- Dropout Prevention
- Align K-12 standards with international and college admission expectations
- Teacher Quality
- Simplify college admission process
- Need-based aid
- Keep college affordable
- Reduce college dropouts
- Provide post-secondary opportunities to adults

Virginia Chamber of Commerce Blueprint recommends:

- Extend early childhood development and pre-school readiness to all children statewide
- Link basic education with workforce preparation in K-12 curricula for both academic and technical careers
- Increase emphasis on skills training at high school and post-high school levels
- Maximize high school completion rates
- Retain and up-skill workers currently in the workforce
- Retain and re-position older workers to extend their useful work life beyond normal retirement age

Source: *The Virginia Chamber of Commerce Blueprint Meeting*, July 17, 2013.



High School Graduation and College Preparation Continues to Be a Focus

- The Virginia Department of Education (VDOE) instituted a College and Career Readiness Initiative in collaboration with the State Council of Higher Education (SCHEV) and the Virginia Community College System (VCCS).
 - *Ensure that college and career-ready learning standards in reading, writing and mathematics are taught in every Virginia high school classroom.*
 - For example, tougher SOLs in reading and math (to assess college readiness).
 - Technical assistance and professional development for educators to support these new expectations.
 - *Strengthen students' preparation for college and the work force before leaving high school.*
 - Capstone courses to support students that need additional instruction.
- VDOE has identified indicators of college readiness that link to a high probability of enrollment and persistence in higher education.
 - *Participating in a college preparatory curriculum that includes Algebra II and chemistry.*
 - *Earning advanced proficient scores on mathematics, reading, and writing SOL assessments.*
 - *Earning an advanced studies diploma.*
- VDOE and SCHEV are employing the Virginia Longitudinal Data System (VLDS) to analyze the associations between secondary achievement and postsecondary outcomes.



Additional College Preparation in High School Could Reduce Remediation Later

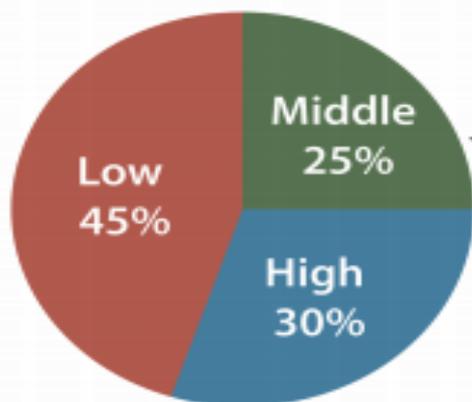
- Around 11 percent of courses taught by Virginia community colleges are in Developmental Math and English.
 - On average 45 percent of all incoming students at two-year schools require some kind of developmental coursework before entering college-level courses.
- Approximately three percent of students in four-year schools require developmental education before entering credit-bearing courses.
- VCCS has embarked on a major project to reform and redesign its Developmental Math and English programs so that students will be more successful in moving beyond remediation.
 - Made changes to the curriculum and to the placement tests which measure mastery of the course content in Math and English.
- Collaborative research between VDOE, SCHEV, and the VCCS will allow for the assessment of current practices so that improvements can be made.



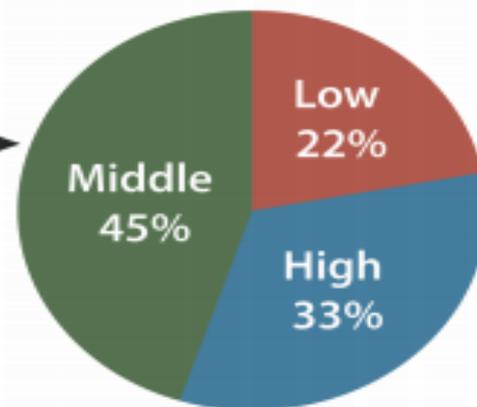
Type of Degree or Training Matters

Workforce Skill Levels vs. Projected Workplace Skill Demands

2007 Skill Levels in America's Workforce



2014 Demand for Skill Levels in the Workplace



20% Skills Gap

Source: Analysis by Chmura Economics and Analytics based on ACT data.

The supply side is based on education attainment. Low Skill = high school or less. Middle Skill = two years of education / training beyond high school. High Skill = four-year degree and higher.

The demand side compares requirements of jobs based on education and/or skills needed to be successful on the job. This information comes in part from the ACT Job Pro database and test and BLS O*NET information.

Source: Council on Virginia's Future.



Additional K-12 Changes Reflect a Focus on Preparation for College or Career Readiness

- According to the National Skills Coalition, *that while 47% of the jobs in VA are “middle skills” jobs, only 39% of the working population is trained for these jobs.*
 - Gap will increase because 53% of skilled trades workers are age 45 or older.
 - “Middle skills” jobs require either two years of education or training beyond high school.
- Examples of actions in recent years have included an acknowledgement of expanding “middle skills” workers to enhance the educational pipeline.
 - Reduced the types of high school diplomas from seven to three.
 - Also increased the standards for graduation including a requirement for standard diploma students to attain a workforce credential prior to graduation (i.e. Career Readiness Certificate or specific industry certification).
 - Established a statewide Microsoft Academy (12,800 certifications to high school students).
 - Planning grant for a Governor’s Academy for Student Apprenticeships and Trades.
 - High school to work partnership legislation to provide those students with on-the-job experiences.
 - Legislation enacted that requires a student career plan to begin in 7th grade.

Source: *Workforce Goals and Accomplishments*, Elizabeth Creamer, November 2013.



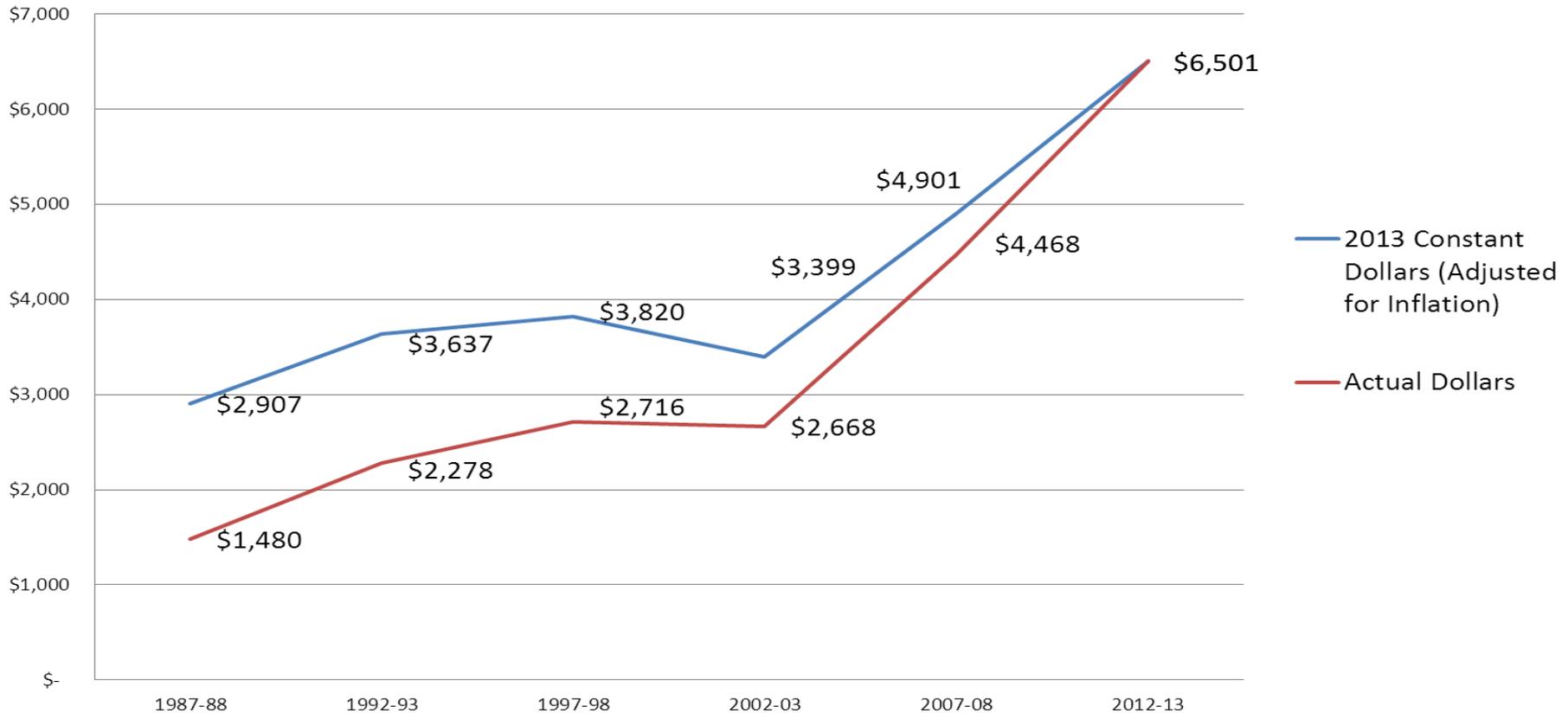
Affordability Can be a Barrier to Attainment

- State funding reductions to higher education have been substantial; additional funding has been provided but is not yet back to 2008 levels.
- Tuition and fee increases have backfilled a portion of these reductions.
 - Institutions have responded to pressure to keep tuition and fee increases low, at an average increase of 4.1 percent last year and 4.3 percent this year.
- The extent to which tuition and fee dollars have been used to fund the education of in-state undergraduate students has increased dramatically.
- This de facto placing of the majority of the needed funding on parents and students has only exacerbated the need for dealing with financial aid, debt, and the overall funding of the higher education system.



2012-13 Tuition and Mandatory E&G Fees

Average Full-Time In-State Undergraduate Tuition and Mandatory E&G Fees (Four-Year Institutions)

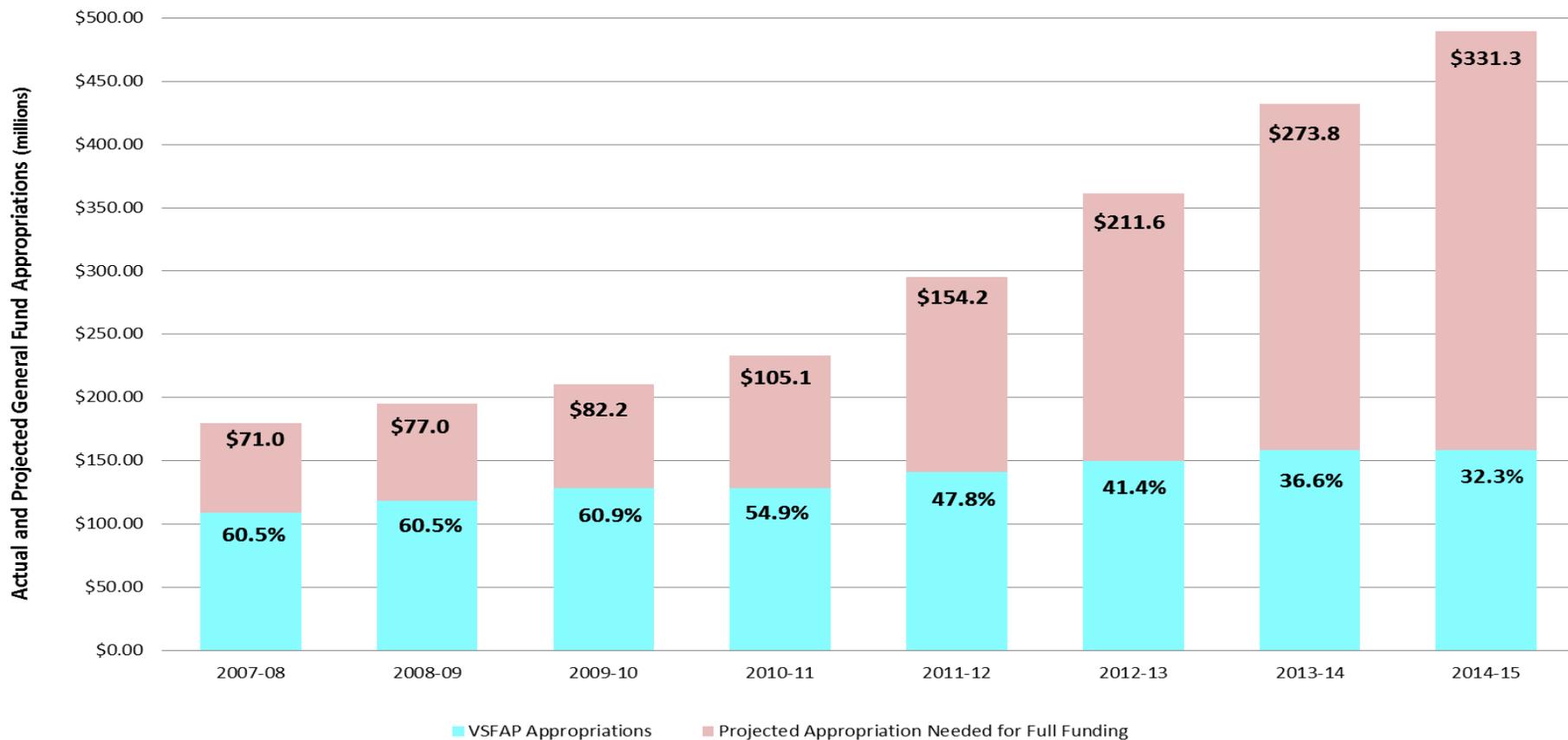


Source: SCHEV's 2012-13 Tuition and Fees at Virginia's State-Supported Colleges and Universities.



Need Met for Virginia In-State Students is Declining

Virginia Student Financial Assistance Program Appropriations (in millions) and Percent Projected Need Met - FY 2008 to FY 2015

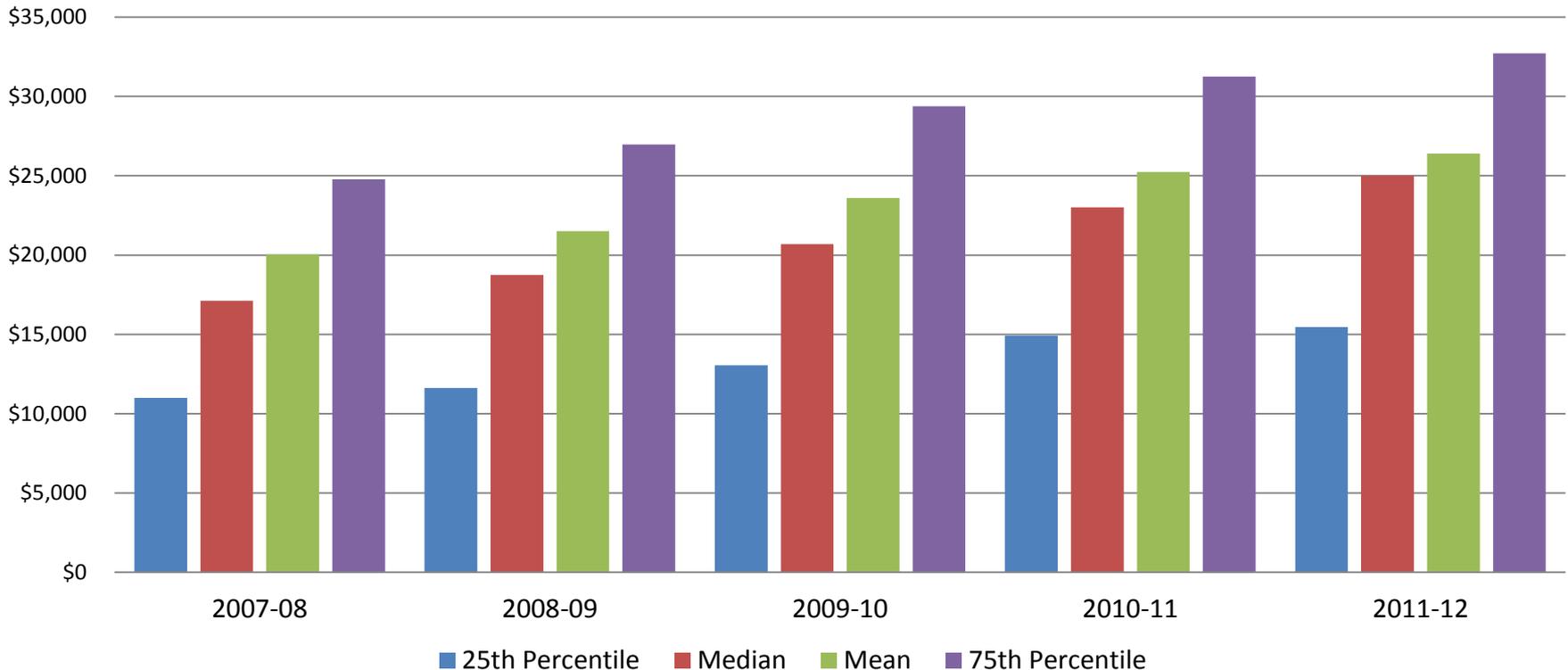


Source: SCHEV data, 2013 and 2012.



Virginia Student Debt is Increasing

Known Debt at Graduation of Student Borrowers by Quartiles



Source: SCHEV Research Data, November 2013.

Note: The four-year bachelor's degree mean and median debt levels reported on this site may differ from that reported by individual institutions. Many institutions report indebtedness based on the Common Data Set definition, which limits the indebtedness level reported to include only those students who entered the institution as first-time in college (FTIC) students. The inclusion of graduates who entered as transfer students may tend to lower the overall mean or median debt level because it does not include any debt that transfer students acquired while attending previous institutions outside Virginia and relatively few transfers from Virginia's two-year colleges incur debt prior to transfer.



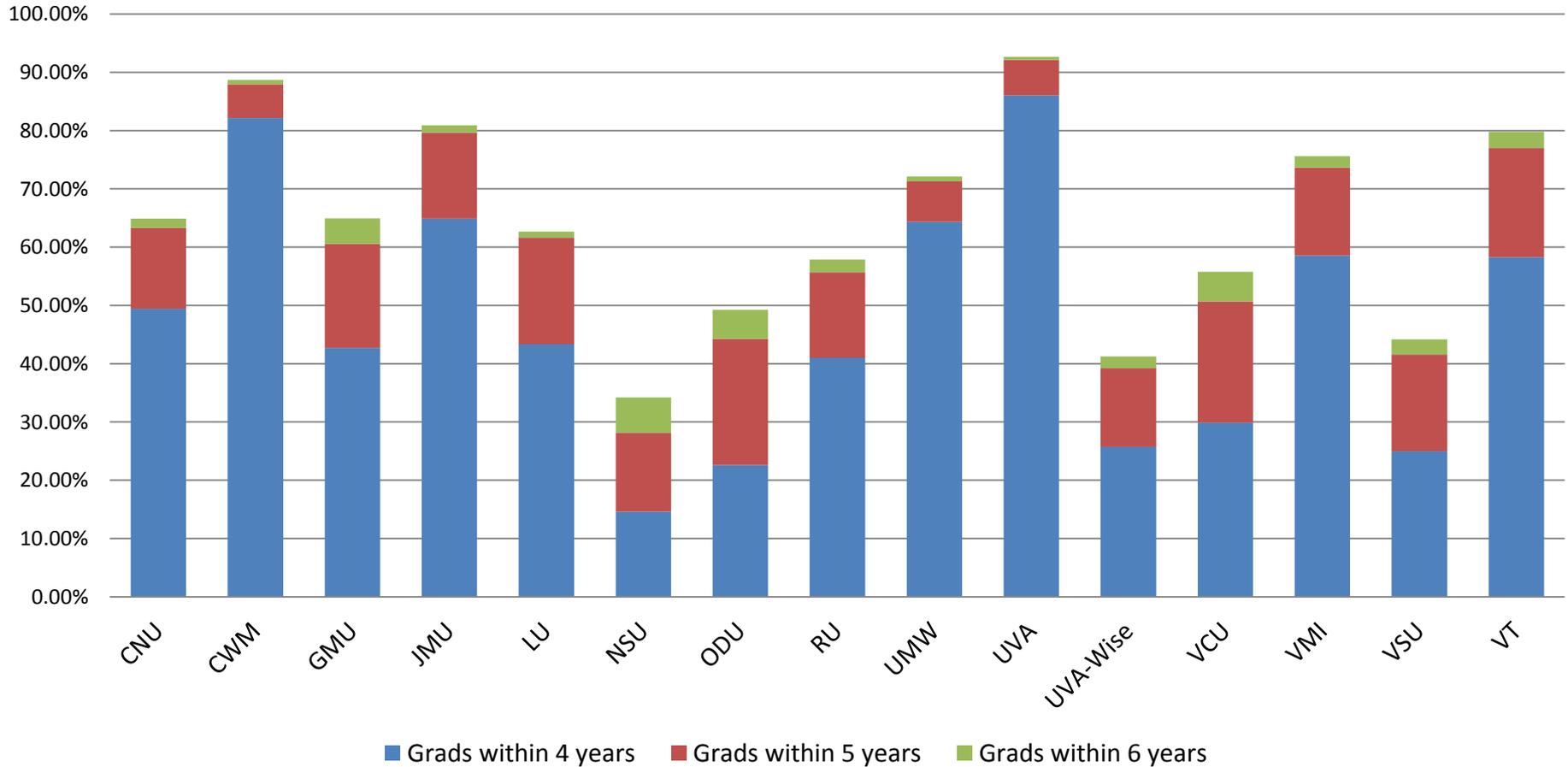
Graduation/Retention Programs Have Become a Focus to Increase Attainment

- In 2009, Virginia ranked 9th in the nation for bachelor's degrees awarded within 6 years and 18th for associate's degrees attained within 3 year (Virginia Performs).
 - However, graduation rates between Virginia's public higher education institutions vary dramatically and there is room for improvement.
- Although Virginia performs relatively well overall, maintaining and improving performance is key to staying competitive in a global economy.
- Graduation and retention programs have become a focus under the TJ 21 legislation and implementation.
 - Enrollment projections from the public colleges and universities involve a reliance on increasing these numbers to continue to produce additional degrees.
 - It will be important to evaluate the initiatives that have been funded related to these efforts so that best practices can be replicated.



Virginia Four-Year Public Institution Graduation Rates Vary

Cohort Graduation Rates, Four-Year Public Institutions



Source: SCHEV data, Cohort 07-08, November 2013.



Six-Year Plan Initiatives Related to Degree Production/Attainment

Summary of Selected Initiatives in Institutional Six-Year Plans - Summer 2013

Institution	Alternative Degree Completion/ Flexibility	Industry Certifications	Financial Aid	Non-traditional Populations	P-16 Programs	Regional Programs	Retention/ Additional Degrees	Student Success	Transfers
CNU	✓		✓				✓	✓	
CWM	✓		✓				✓		
GMU	✓		✓	✓			✓	✓	
JMU	✓			✓	✓			✓	✓
LU	✓			✓	✓	✓	✓	✓	✓
NSU			✓		✓		✓	✓	✓
ODU	✓			✓			✓	✓	
RBC	✓			✓	✓			✓	✓
RU	✓		✓				✓	✓	
UMW	✓						✓	✓	
UVA	✓		✓		✓	✓		✓	✓
UVA-Wise	✓		✓		✓		✓	✓	
VCCS	✓	✓	✓	✓	✓	✓	✓	✓	✓
VCU	✓		✓		✓		✓	✓	✓
VMI	✓		✓				✓	✓	
VT	✓		✓				✓	✓	
VSU	✓			✓	✓				✓

Source: SFC staff analysis of higher education six-year plans, November 2013.



Six-Year Plan Examples of Investment Related to Degree Production/Attainment

- **Virginia Commonwealth University (VCU):**
 - Continuing intensive advising and student engagement.
 - Reduce time to degree through online and summer programs.
 - Improve retention through living-learning environments.
- **Old Dominion University (ODU):**
 - Create a "Back on Track: ODU Solution for Student Stop-Out" (on-line degree completion initiative) to address the need for more Virginians to attain a Bachelor's or graduate degree. The focus will be on affordability, flexible course delivery, and support services for student success.
- **George Mason University (GMU):**
 - The university plans to grow enrollment by admitting more new students and retaining more existing students with the goal of awarding 100,000 degrees in ten years (an increase of approximately 25 percent).
 - “Mason Online”, a new initiative to provide degrees that can be earned entirely online. Also exploring innovative approaches to expanding degree completion opportunities for non-traditional student markets (i.e. military personnel, veterans, and working professionals).



Action Plan

- Renew the focus on P-16 collaboration.
 - Lifetime focus on educational attainment to enhance the prosperity of Virginians.
 - School readiness.
 - Recognizing regional differences.
 - Altering models of learning that have been ineffective or may be unaffordable in the future.
- Focus on better linkages between workforce, economic development, and education.
- Focus on where the jobs will be and skills alignment (or how to steer people toward the middle skills gap, etc.).
- Enhance public/private partnerships that benefit businesses, the state, and our citizens.
- Pilot initiatives.
 - Programs to reduce the need for remediation.
 - Work-study programs.
 - Enhanced transfer grant and gap aid funding.
 - Student success programs.



Take Away

- The educational pipeline must include enough individuals to produce sufficient degrees and industry certifications for our citizens to have a higher quality of life and strengthen the economy.
 - Competitiveness with other states and other nations in order to be successful in a global economy.
- To get through the pipeline, students must have the skills to be prepared to navigate the system successfully.
- Students must be able to afford some type of degree or certification.
- Once a student enrolls in a program, they must be retained and ultimately graduate, especially if they have incurred debt to attend school.
- Interventions at each weak point in the pipeline can minimize loss and increase success.
- Educational attainment and workforce issues need continued focus to ensure Virginia's prosperity.
 - P-16 approach must continue with strategic investments and analysis to confirm initiatives are successful.

