

In Virginia there are:

1,279,773

Public school children¹

2,089

Public schools²

\$10,960

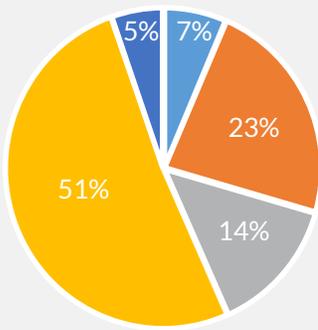
Average total per pupil expenditure³

(above \$10,700 U.S. average total PPE)⁴

133

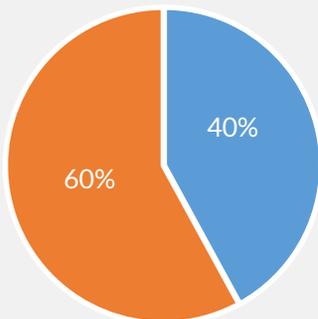
School divisions (districts)⁵

**PK-12 Race and Ethnicity
Virginia, 2014-15⁶**



■ Asian ■ Black ■ Hispanic
■ White ■ Other

**PK-12 Level of Family Income
Virginia, 2014-15⁷**



■ FRL Eligible ■ Not Eligible

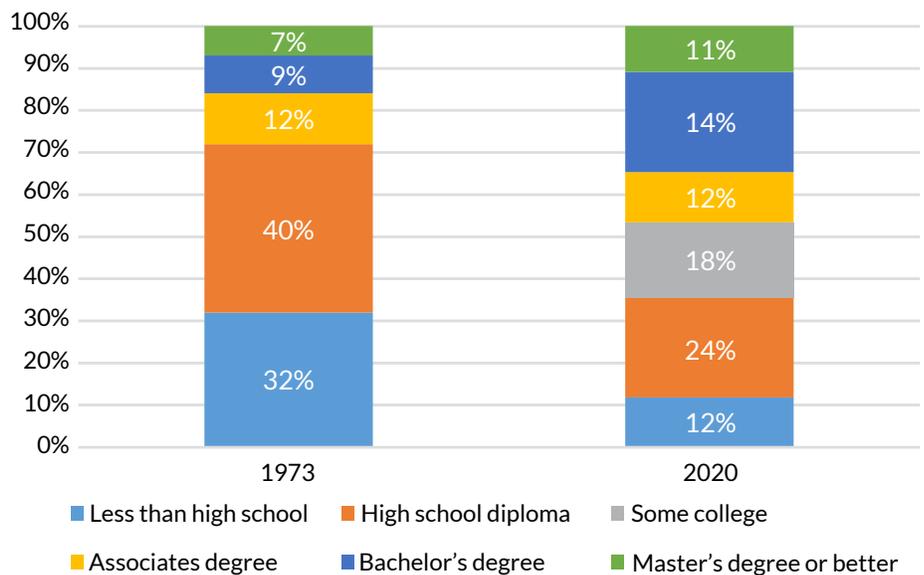
Free and reduced lunch (FRL) is a common way to identify students who are economically disadvantaged, as FRL is only available to families with an income of up to 185 percent of the Federal Poverty Line.

Education and the Economy

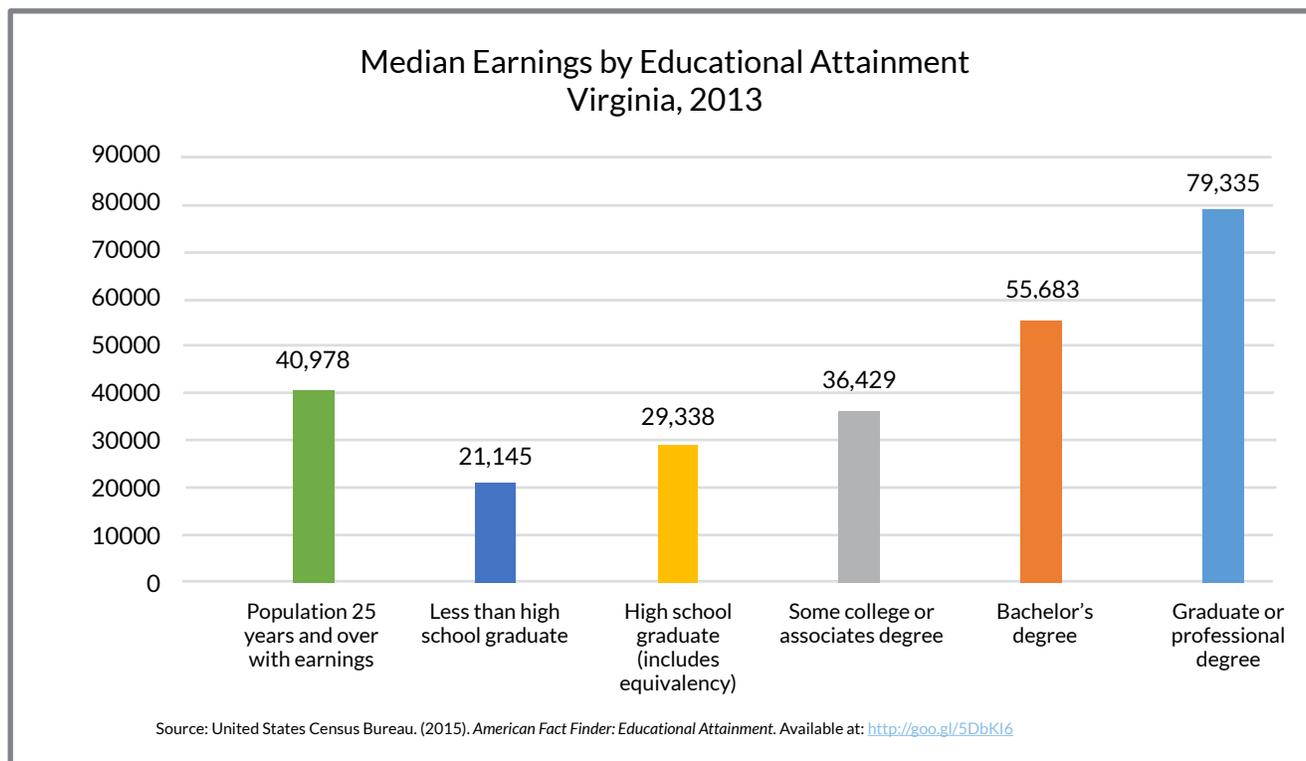
The health and productivity of Virginia's economy depends on the health and productivity of Virginia's education system. Today's students will enter the workplace tomorrow – a workplace that increasingly requires the critical thinking and adaptability that a postsecondary education can, and must, provide.

In 1973, only 28 percent of jobs required postsecondary education. According to recent projections, by 2020, **65 percent of all jobs will require postsecondary education and training.**⁸ A traditional four-year college degree – while providing an excellent return on investment – is by no means the only path that leads to better job prospects.⁹ Nearly half of the American jobs that pay middle-class wages require something less than a bachelor's degree. Associate degrees, certifications, certificates, apprenticeships, and employer-based training all improve employment and earning prospects. The demand for routine and manual jobs is falling, while demand for jobs requiring complex communication and expert thinking is rising. **America and Virginia are becoming an education economy.**

Entry-Level Job Requirements (% Share of Jobs)



Source: Carnevale, A. P., Jayasundara, T., & Hanson, A. R. (2012). *Career and technical education: Five ways that pay along the way to the BA*. Washington, DC: Georgetown University Center on Education and the Workforce. Available at: <https://goo.gl/Y6fIDK>



Education is the Key to a Strong Economy

There is a well-established and strong connection between the educational attainment of a state's workforce and its median wages. For that reason, policymakers can build a solid foundation for economic growth and prosperity by investing in education. Developing and expanding access to a high-quality education system serves to increase economic and life opportunities for residents while bolstering the state economy.¹⁰ The following section presents data on Virginia achievement trends that can be used to examine the state's educational performance.

Elementary and Middle School Achievement Trends

Based on student performance data, the Commonwealth of Virginia has made good progress in recent years. However, when the achievement data are disaggregated by race and socioeconomic status, disparities of outcomes between subgroups become visible. Policymakers, researchers, and practitioners must continue to work together in order to reduce and eliminate achievement gaps.

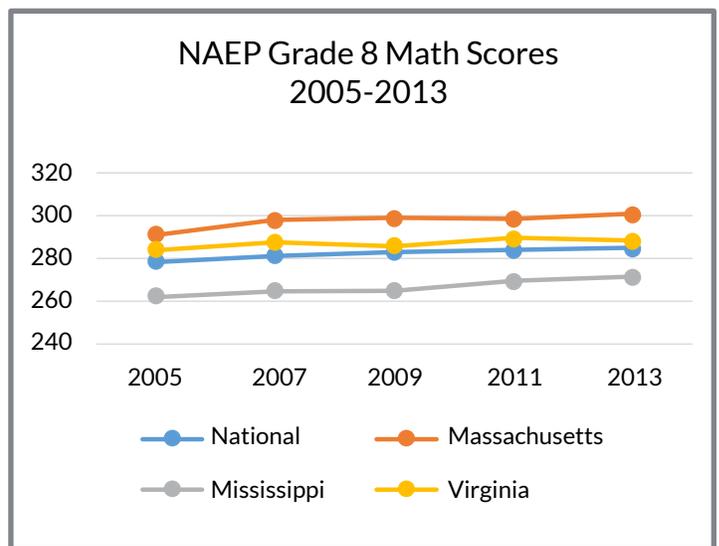
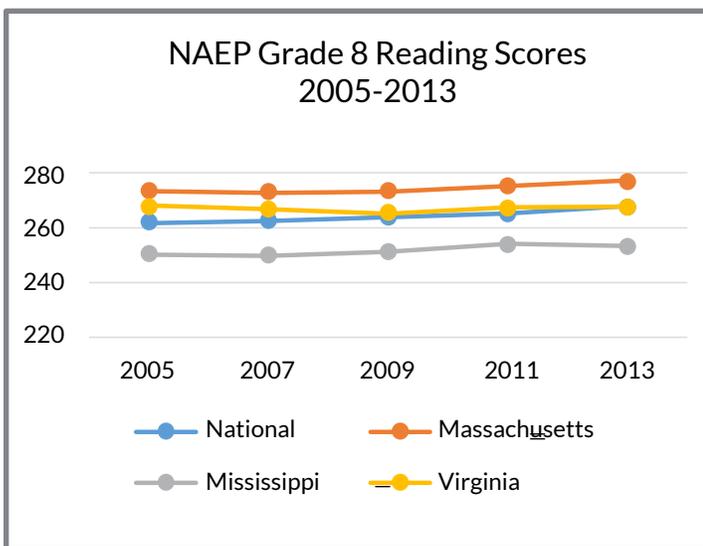
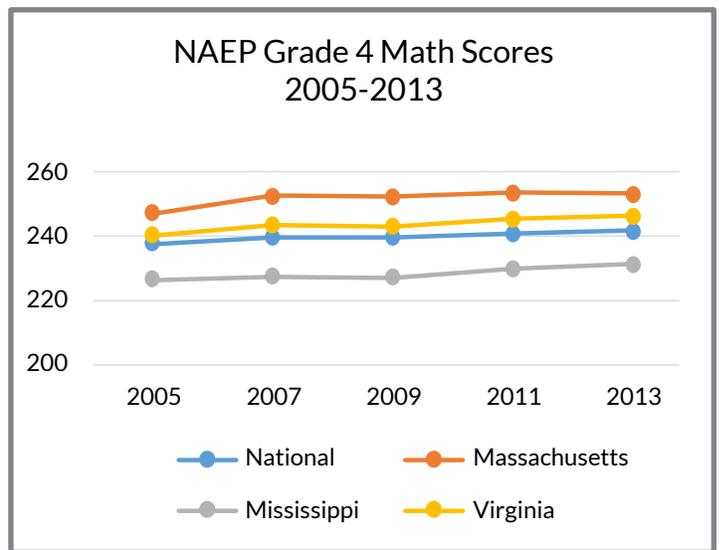
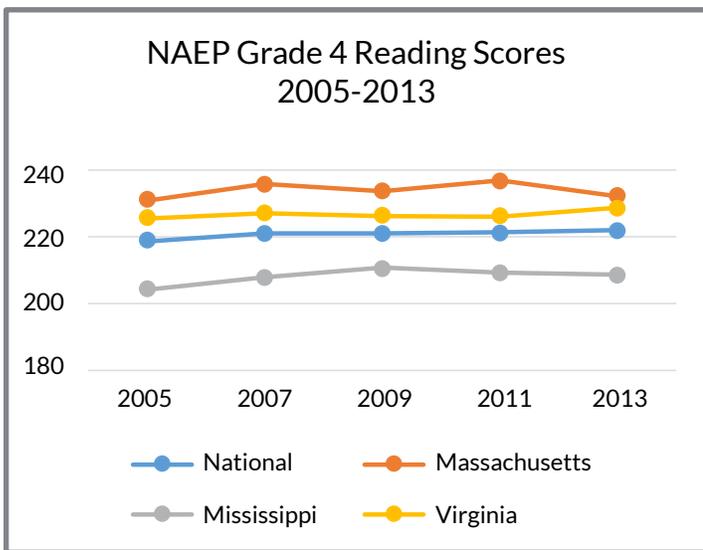
National Assessment of Educational Progress: The Nation's Report Card

The National Assessment of Educational Progress (NAEP) is the largest nationally representative and continuing assessment of what America's students know and can do in various subject areas.

Assessments are conducted periodically in mathematics, reading, science, writing, the arts, civics, economics, geography, U.S. history, and technology and engineering literacy.

NAEP: Virginia's Educational Progress

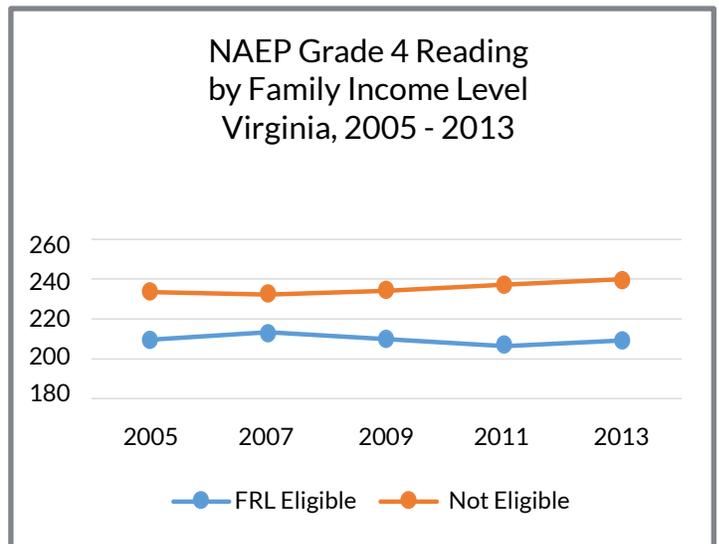
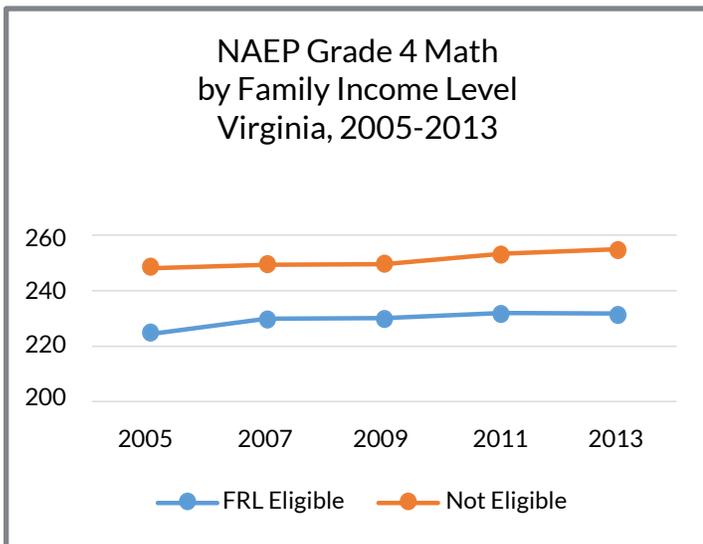
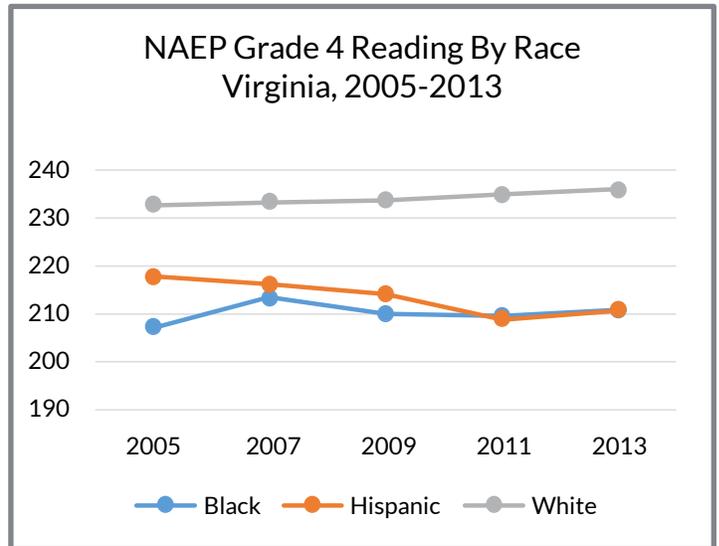
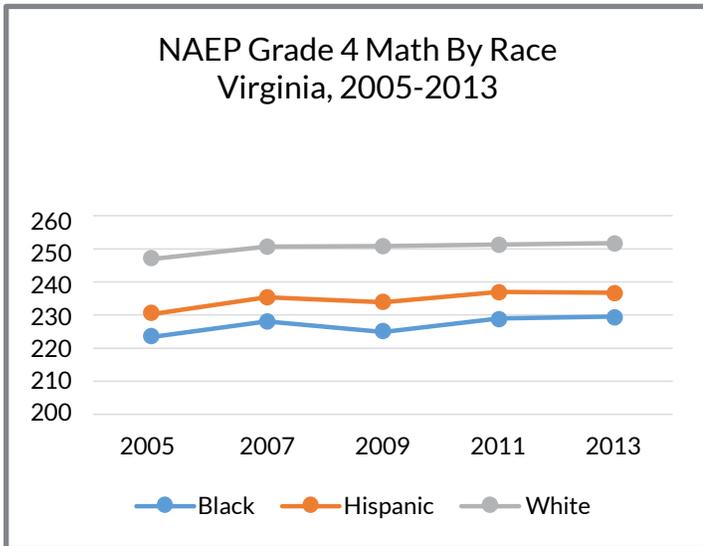
Virginia's elementary and middle school students consistently score above the national average for NAEP reading and mathematics in the fourth and eighth grades. In the charts below, scores from Mississippi and Massachusetts are provided to highlight Virginia's performance in relation to consistently low-and high-performing states.



NAEP Score Source: <http://goo.gl/cTZJfi>

NAEP: Achievement Gaps

Average scores can mask variations in performance between subgroups. When proficiency rates are disaggregated by race and economic status, alarming disparities in achievement can be seen.



Free and reduced lunch (FRL) is a common way to identify students who are economically disadvantaged, as FRL is only available to families with an income of up to 185 percent of the Federal Poverty Line.

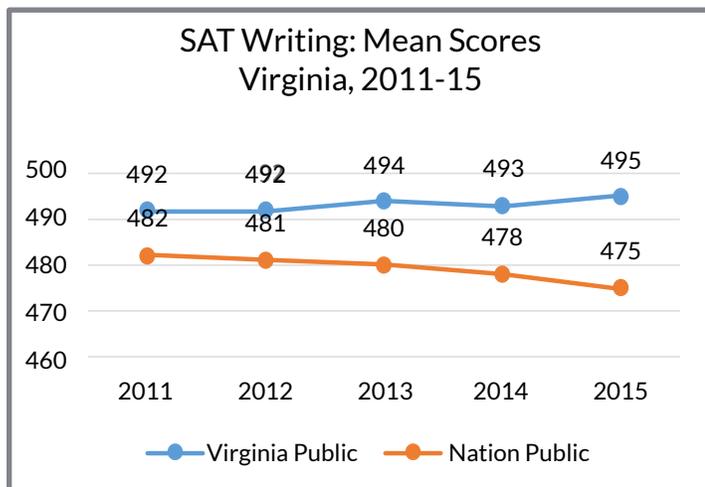
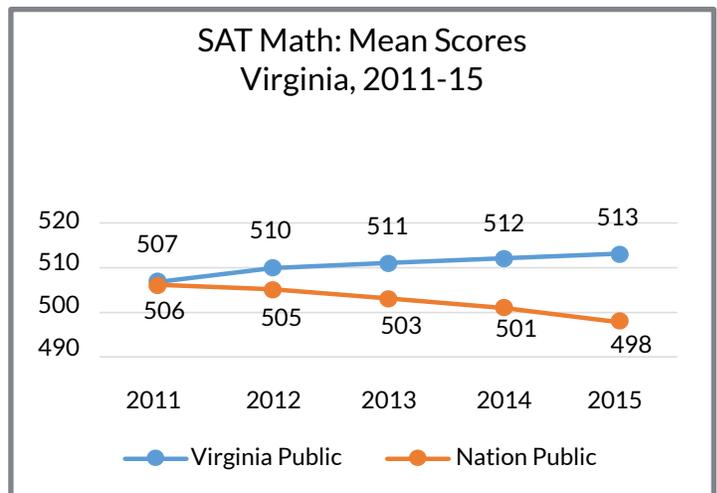
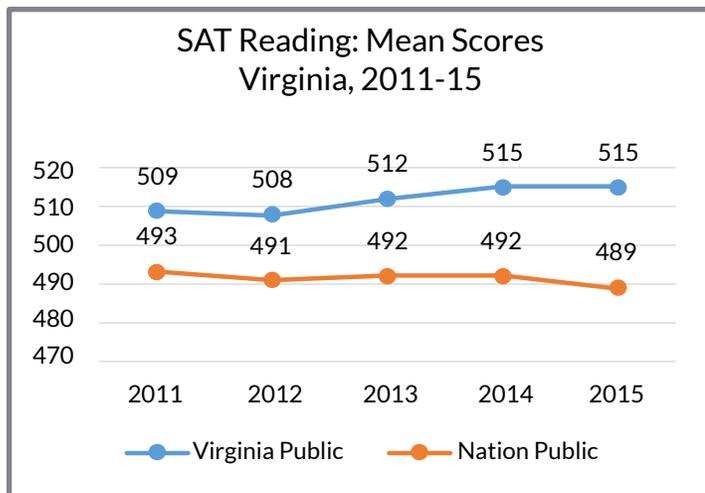
NAEP Score Source: <http://goo.gl/cTZJfi>

High School Achievement Trends

SAT Scores

The SAT is composed of three sections: reading, writing, and mathematics. Each section is worth 800 points for a combined 2,400 maximum score. **The SAT benchmark score of 1550 is associated with a 65 percent probability of obtaining a first-year GPA of a B- or higher, which in turn is associated with a high likelihood of college success – including higher rates of retention and degree completion.**

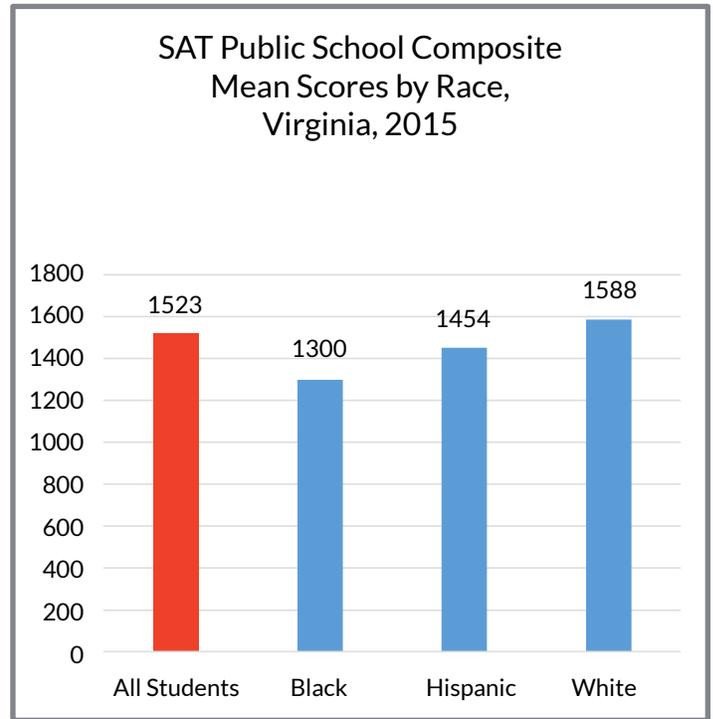
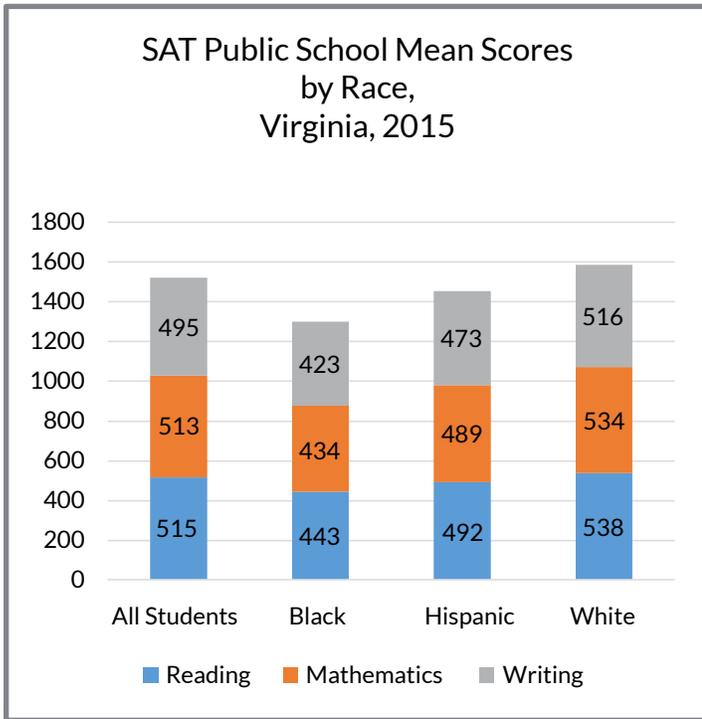
Sixty-eight percent of Virginia’s 2015 public school graduates took the SAT, making it the state’s most popular college admissions test. In recent years, Virginia’s students resisted the national trend of declining SAT scores. The average scores of Virginia public school students increased on the mathematics and writing sections of the test, while matching the average score for 2014 on the reading section.¹¹



SAT Score Source: <http://goo.gl/tww2sN>

SAT: Achievement Gap

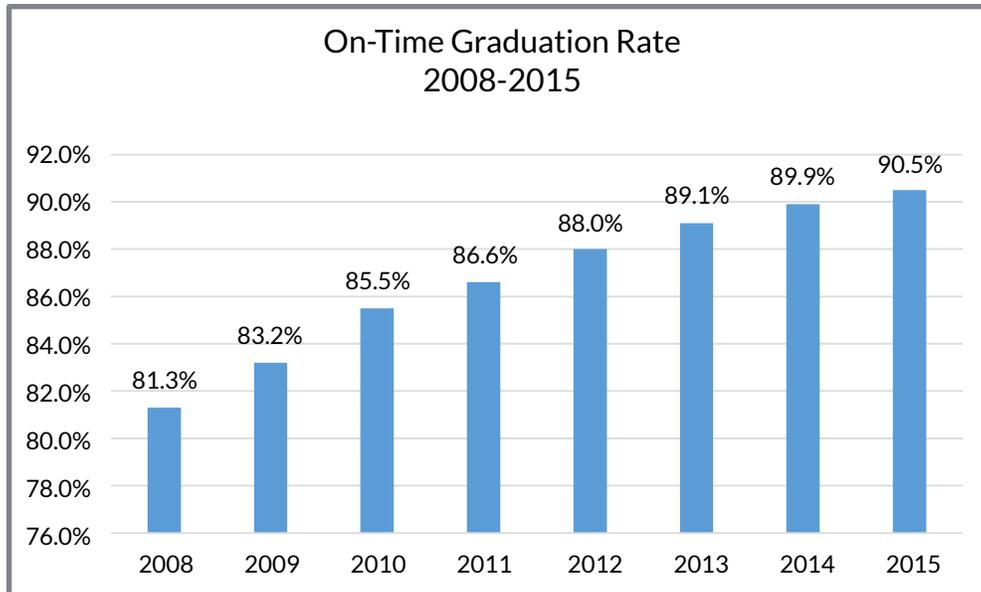
Based on 2015 data, students of color are, on average, less likely to score at or above the SAT benchmark of 1550.



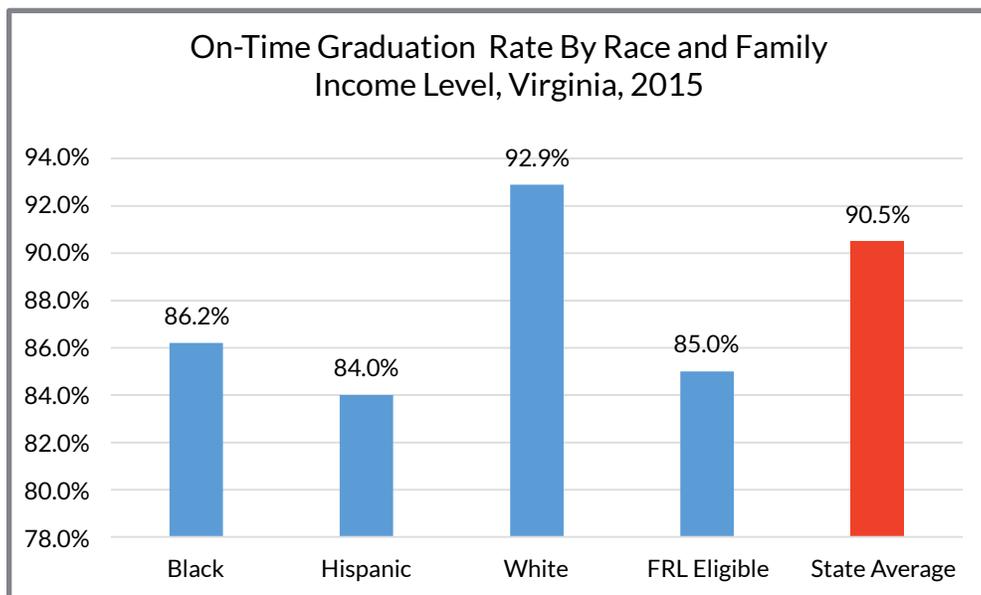
SAT Score Source: <http://goo.gl/tww2sN>

Graduation Statistics

According to the Virginia Department of Education, nine out of 10 students who entered the ninth grade in 2011 earned a diploma within four years. As is the case in the United States as a whole, the percentage of Virginia students graduating on time has steadily increased since 2008. However, students of color and low-income students are less likely to graduate on time compared to averages for the total population. Disparities of outcomes between racial and economic subgroups are indicative of the impact of achievement gaps that can be traced back to the early grades.



Source: <http://goo.gl/ib6lva>



Source: <http://goo.gl/ib6lva>

Early Learning: Education Begins at Birth

Education begins years before children first enter the schoolhouse. In fact, **children are already learning on the day they are born**. The period of rapid brain development that occurs during early childhood is critical for building the foundation of cognitive and character skills necessary for future success in school and life. This makes early care and education a particularly important issue for policymakers.

Research has shown that time spent in cognitively stimulating settings - at home and childcare as well as in preschool - helps to promote children's emotional development, behavioral habits, and learning.¹² As such, high-quality early care and education experiences can improve school readiness and serve as a predictor of children's future academic achievement, health and contribution to society. Given what we know about the importance of early childhood development, investing in high-quality early care and education shows promise as an effective way to improve outcomes for children, strengthen the economy, and tackle a broad range of complex social issues.

There are approximately **19,876,883 children aged 0-4** living in the United States (27% of the child population) (Annie E. Casey Foundation, 2015).¹³

Census data predicts that 10 years from now this number will have increased by more than 1,000,000 (United States Census Bureau, 2015).¹⁴

In considering the obligation to provide a sound basic education for all children, policymakers must take into account the following three points:

- **Education begins at birth:** Research on brain development has shown that the early years are critical for building a sound foundation for future success.
- **High-quality early care and education benefits children and the economy:** Scientists and economists agree that access to high-quality early learning opportunities has a favorable impact on the academic outcomes, social-emotional development, and health of children from lower-income families. Expanding access to quality childcare and preschool education can reduce social costs and strengthen the economy.
- **Early education is part of a birth through 3rd-grade continuum:** High-quality early learning systems must be developed that align curricula and services from birth through the third grade.

Education Begins at Birth:

The early years of a child’s life are essential for laying a strong foundation for future cognitive abilities and character skills. Starting before birth and continuing through adulthood, the brain is constructed from the bottom up, “with simple circuits and skills providing the scaffolding for more advanced circuits and skills over time.”¹⁵

The human brain develops at a quicker rate from conception to age 3 than at any other time in a person’s life. A major component of this process is the serve and return interaction between children and their parents and other caregivers.¹⁶ Research has revealed that the amount of time that a parent or caregiver spends speaking directly to an infant or young child can help to improve the child’s language proficiency and vocabulary. Similarly, emotionally invested and responsive parenting has been found to positively affect children’s emotional competence and self-regulation skills. In essence, interactions between young children and adults help to build and strengthen neural connections in the child’s brain that support the development of communication and social skills.

High-Quality Early Care and Education Benefits Children and the Economy:

What does research say about the benefits of early care and education? Longitudinal studies on the impact of childcare and preschool education have found that **high-quality programs can have a significant and positive effect on school readiness.**¹⁷ Conversely, limited access to cognitively stimulating environments in early childhood may complicate the transition into elementary school, which subsequently can lead to school adjustment problems. Skills beget skills; therefore, small differences between children entering elementary school can expand into much larger achievement gaps by the later grades.¹⁸

The benefits associated with having access to preschool programs are very much dependent upon the quality of instruction and related services. Though there are some examples of exemplary preschool programs in public schools and in private settings, research has shown that there are vast discrepancies in quality between programs, with many falling short of the mark.¹⁹

What do “high-quality” preschool programs look like? High-quality programs develop children’s knowledge and skills across the content areas and help facilitate children’s social, emotional, and physical development. High-quality programs employ teachers with at least a bachelor’s degree, provide professional development opportunities for teachers, base instruction on comprehensive early learning standards, and maintain smaller class sizes.

The *National Institute for Early Education Research* (NIEER), a research center at Rutgers University, identifies 10 research-based quality standards benchmarks for state pre-K programs. In the NIEER *State of Preschool Yearbook 2014*, Virginia was identified as having met six of these pre-K quality standards.²⁰

NIEER National Quality Standards Checklist: Virginia’s Performance in 2014

VA Met Benchmark Requirement

- Comprehensive early learning standards.....
- Lead teacher must have a bachelor’s degree, at minimum.....
- Lead teacher must have specialized training in a pre-K area.....
- Assistant teacher must have a child development associate degree or equivalent, at minimum.....
- Teacher must receive 15 hours/year of in-service professional development and training.....
- Maximum class size (20 children or fewer).....
- Staff-child ratio (1:10 or better).....
- Screening/referral and support services required for families.....
- At least one meal must be required daily.....
- Monitor to ensure adherence to state program standards.....

High-quality childcare and early education may also have broad social and economic benefits. The work of Nobel Prize winning University of Chicago economist Dr. James Heckman indicates that high-quality early care and education programs (between birth and age 5) are often **more effective and efficient than later interventions**, such as the welfare system, adult literacy services, or prisoner rehabilitation programs.²¹ Based on an examination of longitudinal data from the *Perry HighScope Preschool Study* in Michigan, Heckman et al. determined that **early education programs return somewhere in the range of \$7-10 back to society for every dollar invested.**²²

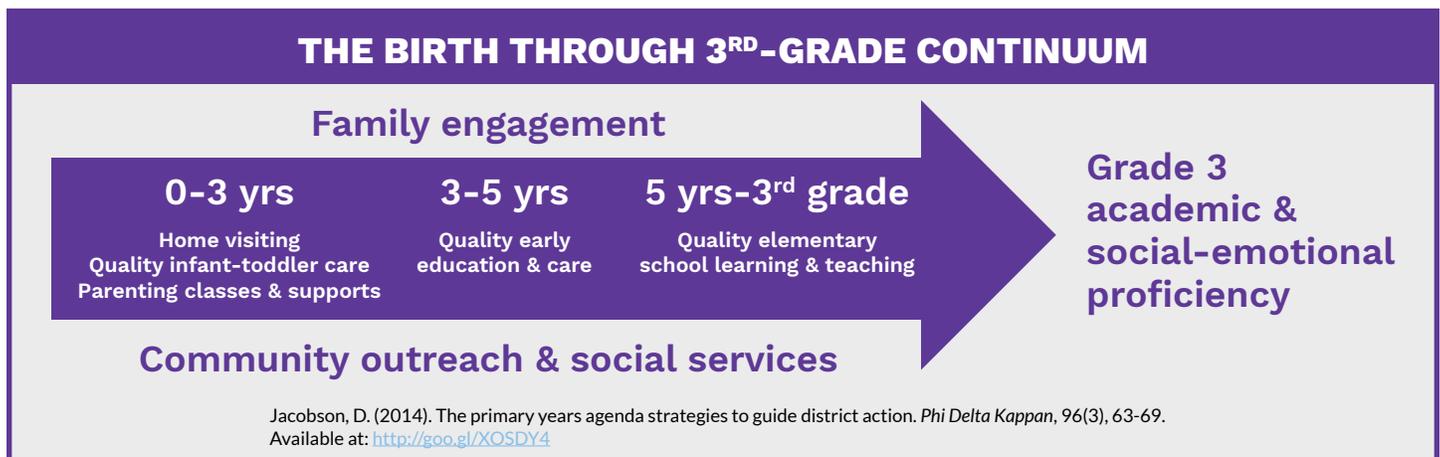
Early Education is Part of a Birth Through 3rd-Grade Continuum:

Approximately 46 percent of the 24 million children under the age of 6 in the United States are currently living in low-income families.²³ Research has found that children living in poverty are less likely to have access to consistent environmental stimulation and learning opportunities than children from higher-earning families. **Access to high-quality early education can therefore be especially beneficial for children from low-income homes**, hence the establishment of Head Start by the federal government.

The year 2015 marks the **50th anniversary of Head Start**, a federally funded preschool program for children aged 3 and 4 living in poverty. The most recent reauthorization of Head Start was in 2007, when it passed with bipartisan support. In 2015, however, approximately 63 percent of children ages 3 and 4 from low-income familiesⁱ were not attending a preschool program.²⁴

ⁱ Low income is defined as family income less than 200% of the federal poverty threshold.

There is some research that suggests the academic gains made by children living in poverty while enrolled in early education programs fade away during the early grades.²⁵ For that reason, though access to a quality early education is critical, it is also important that high-quality systems are developed that provide a seamless continuum of services from birth through the 3rd grade in order for the positive effects of early learning to be sustained. The “**Birth through 3rd-Grade**” movement seeks to create aligned systems of education and care with comprehensive approaches for addressing children’s academic, social and health needs. In a report published in 2015, the *Institute of Medicine and the National Research Council* laid out “a blueprint for action based on a unifying foundation that will underlie more consistent and cumulative support for the development and early learning of children birth through age 8.”²⁶ Essentially, policymakers should consider ways to improve coordination and alignment among stakeholders at multiple levels and across different systems.



Recent Early Care and Education Policy Developments

Recent policy developments at the federal level have included the passage of *Child Care and Development Block Grant Act of 2014* (CCDBG), which reauthorized the 1996 law governing the **Child Care and Development Fund** (CCDF). Under this law, states have been allocated funds to develop and implement strategies for increasing the supply and quality of childcare for low-income families and children with disabilities. Activities for raising the quality of care include the implementation of health, safety, licensing, training and oversight standards. Another key feature of CCDF is the requirement that states develop a website containing consumer education information about local childcare options in order to help facilitate parental choice.²⁷

In addition, the 2014 federal **Preschool Development Grants Program** has awarded funding to support 18 states, including Virginia, in developing or enhancing their preschool education infrastructure. There were two types of competitive grants awarded to states: **Development Grants** were made available for states serving less than 10 percent of 4-year-olds that had not received a *Race to the Top Early Learning Challenge* (RTT-ELC) grant, and **Expansion Grants** were for states that already served 10 percent or more of 4-year-olds that had received an RTT-ELC grant. The Preschool Development Grants Program aims

to increase the number of high-quality programs available in targeted communities serving 4-year-olds from low-and moderate-income families.²⁸ In December 2014, it was announced that Virginia had been awarded a \$17.5 million Expansion Grant.

Data on Poverty and Childcare in the Commonwealth of Virginia

Number of Virginia children aged 0-4 ²⁹	Number of Virginia children aged 0-4 living below the federal poverty level ³⁰	Number of Virginia children aged 3-4 living below the federal poverty level ³¹	Number of Virginia children aged 4 enrolled in state-funded preschool ³²	Number of Virginia children aged 3-4 enrolled in federally-funded Head Start programs ³³
514,893	92,180	36,563	18,021 (17.8%)	12,526

Early Education Legislation in Virginia

The *Virginia Preschool Initiative* (VPI) has served “at-risk” 4-year-olds, not already served by Head Start, since 1996. Starting in 2015, Virginia will use its \$17.5 million federal Expansion Grant to create a more comprehensive and effective preschool program, called **VPI Plus** (VPI+). VPI+ seeks to improve the quality and impact of preschool programs in high-need communities. According to the Virginia Department of Education, “by the end of the grant term, 3,179 4-year-olds at or below 200 percent of the Federal Poverty Line will be served annually through VPI+ in 11 local school districts.”³⁴ VPI+ will combine rigorous and research-tested professional development with broad community partnerships and pathways for parental involvement in order to enhance the quality of available programs.

The reauthorization of CCDF will help fund strategies for increasing the supply and quality of childcare programs and related services for infants and toddlers across Virginia. CCDF funds will also be used to provide consumer information to parents about local childcare options so that they can make informed choices.³⁵

Public Policy and Early Education

To summarize, the ways that adults interact with infants and toddlers have been found to influence children’s learning and development. Research indicates that increased access to high-quality childcare and preschool programs can improve outcomes for children from low-income families, which may also have potential benefits for society and the economy. Given the vast amount of variance in the quality of available programs, it is essential that policymakers ensure that necessary resources, supports, and accountability standards are implemented in order to improve the quality of instruction and related services. Finally, early education must be aligned with the traditional K-12 education system. Creating systems of education and care from birth through the 3rd grade helps to ensure that a greater number of children are afforded equality of opportunity.

Educational Leadership in High-Need Schools

Principals play a critical role in cultivating and maintaining high-performing schools. Research shows that **school leadership is second only to teaching in its impact on children's learning outcomes**. What is more, underperforming schools are unlikely to improve without the expertise of effective leaders. Given what we know about the importance of school leadership, policy strategies for preparing, hiring and supporting high-quality principals are vital for policymakers to consider.³⁶

Principals account for approximately 25% - teachers 33% - of a school's total impact on achievement

(Source: Marzano, R. J., Waters, T., & McNulty, B. A. (2005). *School leadership that works: From research to results*. Alexandria, VA: ASCD)

The obligation to provide a sound basic education for all children, requires policymakers to consider the following:

- **Leadership matters:** Effective leaders have a significant effect on school culture and instructional quality.
- **The impact of strong leadership is greatest in high-poverty, low-performing schools:** Effective leadership is the catalyst for turning around troubled schools.
- **Identifying, preparing, and hiring effective principals matters for school improvement:** The successful transformation of low-performing schools will require strong candidate pools of individuals with the necessary skills, knowledge, and dispositions.
- **Retaining effective principals matters for school improvement:** Principal turnover has a negative impact on school improvement. Therefore, policymakers and school district leaders must find ways to support principals and limit principal turnover.

Leadership Matters

High-quality educational leadership is a causal force in the development and transformation of school performance, culture and climate. Primary responsibility for hiring new teachers rests with the principal, and research has shown that effective principals hire better quality teachers. Skilled principals also cultivate a more positive school climate, which can result in higher levels of teacher retention. The ability to retain teachers is considered essential to school improvement efforts as research has found that frequent teacher turnover can harm student achievement. In short, if we are to improve K-12 student outcomes for all children, we must focus on ensuring that every school has a highly-effective principal.³⁷

What do effective school leaders do differently?

The Wallace Foundation has identified five key practices associated with quality leadership:

- Shaping a vision of academic success for all students;
- Creating a climate hospitable to education;
- Cultivating leadership in others;
- Improving instruction; and
- Managing people, data and processes to foster school improvement.

For more information on this subject, read the leadership edition of The Hunt Institute's *re:VISION: Building Leadership in Schools* policy brief: <http://goo.gl/yV2T1a>

The Impact of Strong Leadership is Greatest in High-Poverty, Low-Performing Schools

The job complexity of school leadership in U.S. public schools has increased significantly in recent years. Today's principals must maintain their traditional role as managers, while also functioning as instructional leaders. In addition, the principal is now held more accountable for test scores than ever before.

Though there is evidence to suggest that leadership affects student learning in all schools, **the impact of strong leadership is greatest in high-poverty schools.**³⁸ Research has shown that these schools have higher levels of student achievement when they are led by experienced principals. Yet, given the challenges and pressures of the job, expert principals often choose to transfer from difficult-to-lead, high-need schools for leadership positions in higher-achieving schools serving children from more affluent populations. **Frequent turnover of principals in underperforming schools serves to create instability and undermine improvement efforts.** Moreover, this turnover is expensive. Conservative cost estimates of developing, hiring, and onboarding each principal is \$75,000.³⁹

“There are virtually no documented instances of troubled schools being turned around in the absence of intervention by talented leaders. While other factors within the school also contribute to such turnarounds, leadership is the catalyst.”

(Leithwood, Seashore Louis, Anderson, & Wahlstrom, 2004, p. 17)⁴⁰

Schools serving many low-income, non-white, and/or low-achieving students tend to have principals with less experience, less education, and qualifications from less selective colleges.

Loeb, S., Kalogrides, D., & Horng, E. L. (2010).
Principal preferences and the uneven distribution of principals across schools.
Educational Evaluation and Policy Analysis, 32(2), 205-229.
Available at: <http://goo.gl/Bo3cgv>

Identifying, Preparing, and Hiring Effective Principals Matters for School Improvement

Researchers and policymakers now recognize that the preparation of effective school leaders to serve in high-need schools demands much more than graduation from a licensure program.⁴¹ **The successful transformation of low-performing schools will require a sufficient supply of school leaders with the requisite skills, knowledge and dispositions.** For example, principals must maintain a deep commitment to improving outcomes for all children and have the ability to adapt to adversity and ambiguity. Across the nation, research teams, policymakers, and practitioners are experimenting with innovative strategies for developing and supporting talented leaders to serve in high-need schools.

Design Elements of High-Quality Principal Preparation Programs:

The Education Commission of the States (ECS) have identified a list of selected research and readings on principal preparation programs.⁴² Some of the common design elements of the high-quality programs cited by ECS are listed below:

- **Clear Expectations** – Policymakers and district leaders must develop standards that clearly identify the skills, knowledge, and dispositions that a principal must have in order to raise student achievement.
- **Strategic Recruiting** – Candidate pools must be cultivated from which to identify and recruit individuals with proven success as a teacher and strong leadership potential.
- **Rigorous Preparation** – Candidates must develop and demonstrate their leadership skills and dispositions during authentic, performance-based assessments.
- **Selective hiring** – Districts should hire candidates that have demonstrated that they have the necessary skills, knowledge, and dispositions to be an effective leader.
- **Ongoing support** – Ongoing support must be established for early-career principals, including school-based coaching and targeted professional development, in order to maximize leadership potential and limit turnover.

In addition to the design elements listed above, policymakers and school system leaders must make diversity a core commitment. The United States Census Bureau projects that by 2020 the majority of the nation's children will be part of a minority race or ethnic group. Research has found that principals

of color serve as effective role models and can increase students' levels of motivation and achievement in schools with high populations of minorities. Currently, however, African-American and Hispanic principals remain underrepresented in comparison to the student bodies that they serve.⁴³

Retaining Effective Principals Matters for School Improvement

Limiting principal turnover in high-need schools is an issue that requires careful consideration. It is not enough to simply prepare and hire talented leaders; policy solutions must also be developed to ensure that effective principals remain in high-need schools. Legislators and district leaders should develop and implement “beyond the pipeline” supports, including school-based coaching and mentoring, in order to cultivate a more positive climate for principals, facilitate professional growth, and limit turnover.

“The proportion of principals that have been at their current school at least six years is roughly 50% higher in the highest achievement schools.”

(Branch, Hanushek, & Rivkin, 2009, p. 7)⁴⁴

Identify, Prepare, Hire, Retain

To summarize, effective principals are a necessity if we are to increase student achievement in our public schools. The school principal, as the arbiter of school-level policy implementation, and chief decision-maker concerning human capital management and instructional leadership, is a key factor in determining the success of improvement efforts. Effective leadership in high-need schools is contingent upon the knowledge, skills and dispositions of the individual principal in conjunction with systemic structures that foster and support success. In essence, policymakers must consider the best ways to **identify, prepare, hire, and retain** talented school leaders.

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