



Recent K-12 Studies

In this presentation

Summary of recent JLARC K-12 work

Summary of research on cost-effective instruction

Online learning

Spending and funding

Spending impact

General Assembly has recently directed JLARC to review several key aspects of K-12 education

Report title	Release date
Strategies to Promote Third Grade Reading Performance in Virginia	9/2011
Review of Year-Round Schools	10/2012
Low Performing Schools in Urban High Poverty Communities	6/2014
Efficiency and Effectiveness of K-12 Spending	9/2015

Strategies to Promote Third Grade Reading Performance in Virginia (2011)

Key findings

- Teachers are critical to effectiveness of classroom reading programs
- Key strategies can help certain children who struggle to read
- Certain strategies that improve reading are time intensive
- Many other states only tested 3rd grade students statewide on reading and math

Key Rec's / Options

- Maintain or expand early reading training for teachers, use of literacy coaches and reaching specialists
- Provide more support and guidance on best practices
- Support using key strategies, especially intervention, in lower performing divisions
- Limit 3rd grade SOL testing to reading and math

Review of Year-Round Schools (2012)

Key findings

- Year round schools do not necessarily improve the test scores of the general student population
- Test scores of certain students (esp. black and LEP students) do seem to improve due to the (1) shorter summer breaks and (2) opportunities for remediation during intersession
- Year round schools tended to cost about 3% more than traditional schools
- Effective principals and teachers and use of recommended instructional practices still matter, regardless of school calendar

Key Option

Certain Virginia divisions--especially those with high percentages of black or LEP students--may want to consider year-round schools as a way to improve performance

Low Performing Schools in Urban High Poverty Communities (2014)



Community

- Local economy
- Employment
- Education
- Crime and violence



Family

- Household income
- Physical, social, & emotional support
- Stability of family & living situation
- Cognitive stimulation in the home



Public Schools

- School Board & division
- Funding
- Teachers & principals
- Curriculum & instruction
- School climate
- Remedial & enrichment opportunities



Student Achievement

Low Performing Schools in Urban High Poverty Communities (2014)

- Improving low performing schools is a longstanding challenge
- More than 50 years of research documenting the negative effects of poverty on student learning
- Students at Virginia's high poverty schools are more likely to

- Miss days of school

- Score lower on SOL tests

- Switch schools during the year

- Drop out before graduating

Low Performing Schools in Urban High Poverty Communities (2014)

Key finding

- Many urban high poverty schools lacked a sufficient number of effective, committed teachers and did not use recommended instructional practices
- Despite the challenges of poverty, a few urban schools did relatively well by having effective principals and teachers, using recommended instructional practices, and providing support services
- In a local system, the state can facilitate improvement, but state needs the authority

Key Rec's / Options

- Teacher residency programs
- Non-traditional models (year round, support services)
- Give Board of Education authority to make overriding decisions in certain low performing school divisions

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JLARC reviewed about 200 research studies as part of its Sept. 2015 study of K-12 spending

- Most published within the last 5 years
- High quality only
- Broad review: all strategies to increase achievement

Key takeaways from review of research

- The quality of teaching is the most important factor within schools
- Increasing the achievement of low-performing students is cost effective

Research finds that good teachers change lives

- Replacing the bottom 5 percent of teachers with an average teacher would increase students' lifetime earnings by \$250,000 per classroom.
- Increase college attendance, other benefits to society

Source: Chetty 2014

Research finds that teachers can improve over time

- Teaching quality = instructional practice, classroom management, emotional support
- Most teachers improve over time, but effective teachers can be identified early
- One-on-one assessment and coaching, more intensive for the newest teachers

Research shows ways to identify and retain the most effective teachers

- Identifying quality teachers: principals' assessments, test scores, and student surveys
- Reducing teacher turnover
 - Financial incentives to reduce turnover

Research shows benefit of increasing achievement of low-performing students

- Low-performing students have more room to grow
→ larger impact on overall student achievement
- Student level and schoolwide approaches
- Improve the quality of teaching for low-performing students
- Financial incentives to teach low-performing students

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Online learning is a small but growing part of K-12 education in Virginia

- 3% of K-12 students enrolled in online courses (2013-14)
 - Much less than 1% enrolled in fully online programs
- Enrollment increased in recent years
- Recent initiatives seek to expand access to fully online schools
 - HB 324 (2015) would create fully online K-12 school
 - VDOE beginning fully online pilot program

Online learning increases educational opportunity, but effectiveness varies

- **Broader array of educational options available**
 - Enables students to take broader set of courses
 - Most feasible or beneficial option for certain students
- **Most effective for students with strong motivation and time management**
 - Other students may need additional support

Online learning programs cost less than physical schools

- **Most states:**
 - fully online schools funded at 2/3 of physical schools
- **Online industry:**
 - fully online schools should be funded slightly less than physical schools
- **Cost of online programs varies**
 - Educational services
 - Enrollment
 - Instructional staffing and compensation levels

Minimal information about cost and effectiveness of online learning in Virginia

- No accurate method for estimating cost of fully online schools
 - Cost to the state will depend on educational services provided
- No reliable information comparing achievement in online and physical schools

State should take incremental approach to fully online schools

- Incremental approach allows state to determine whether fully online learning is sound policy
- State should use incremental approach to
 - Assess student achievement
 - determine cost to online providers of operating fully online schools
 - better understand services needed to support online students

Recommendations

- VDOE should
 - develop a methodology for estimating the cost of fully online schools
 - annually compare the achievement of students in Virtual Virginia with students in physical schools

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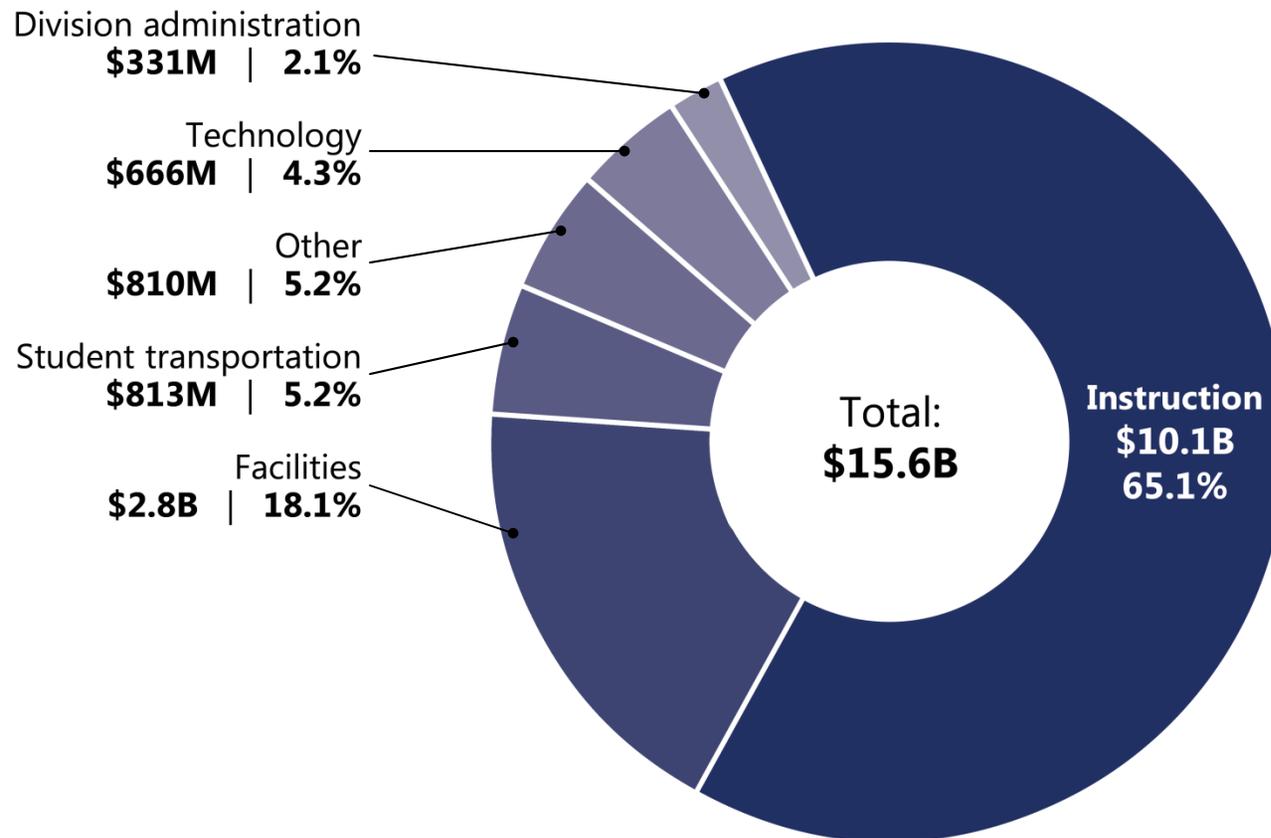
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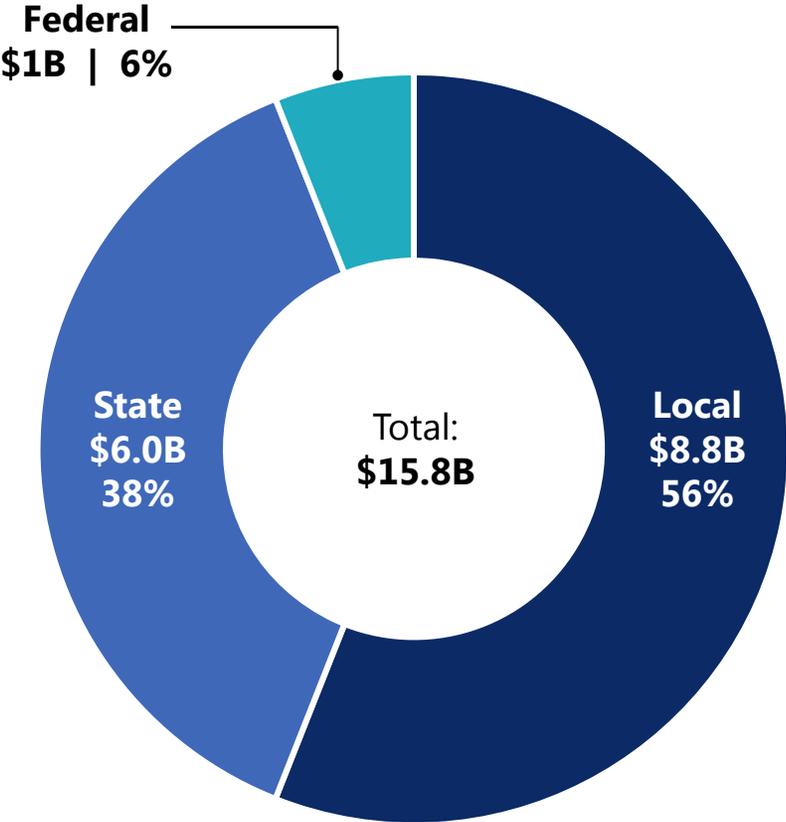
Spending and funding trends and rankings

Spending impact

Spending: School divisions spent \$15.6B on K-12 education (FY 2014)



Funding: Localities provided majority of K-12 funding (FY 2014)



Funding: State and local funding declined for many school divisions (FY 2005–FY 2014)

- State funding per student declined an average of 13%
 - State funding declined for 116 divisions
- Local funding per student declined an average of 5%
 - Local funding declined for 79 divisions

Spending & funding: Virginia's national rankings (FY 2013)

- Total spending = 23rd
- % funding from state = 39th
- % funding from localities = 11th

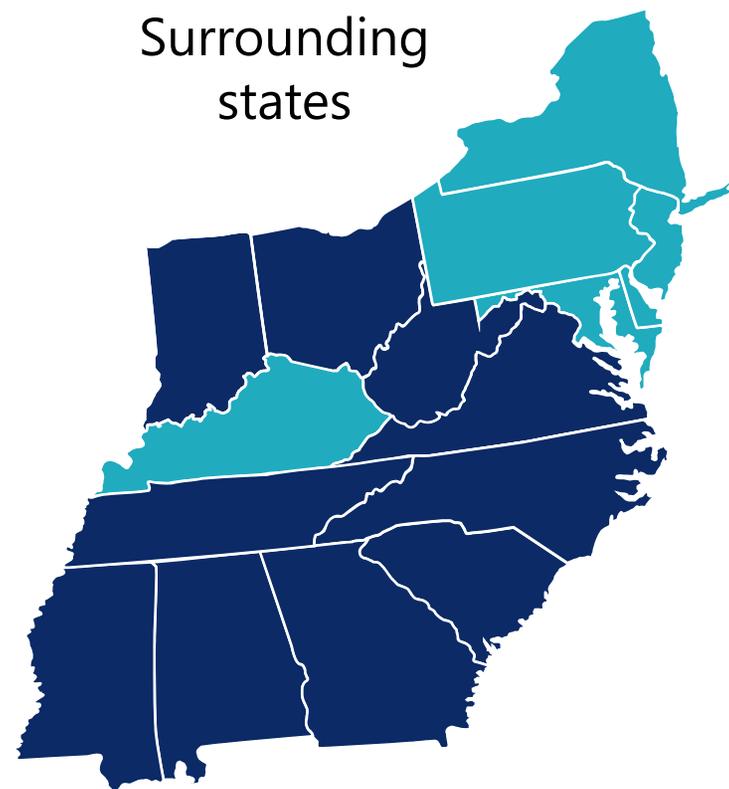
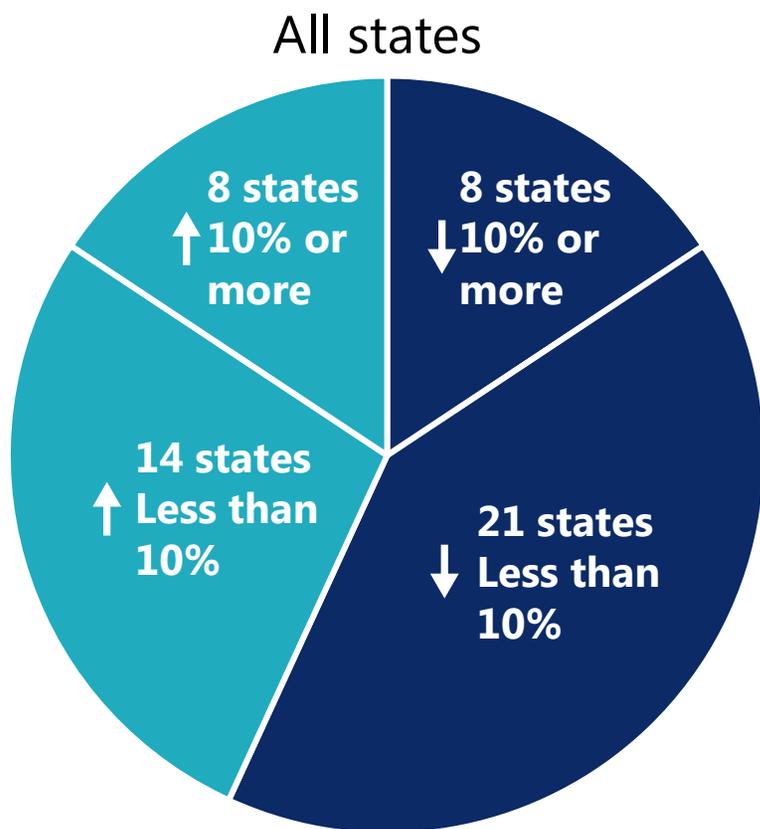
Spending: Total spending per student declined (FY 2005–FY 2014)

- Divisions spent 7% less per student, adjusted for inflation (FY 2005–FY 2014)
- Health insurance spending increased 66%
 - Health spending increased from \$665M to \$1.1B

Spending: Decline not unique to Virginia

(FY 2004–FY 2013)

■ Increase ■ Decrease



Spending: Likely increased in FY 2015 and will likely increase again in FY 2016

- General Assembly recently increased K-12 funding
 - FY 2015 = \$204 million
 - FY 2016 = \$293 million
- FY 2015 spending data available later this Fall

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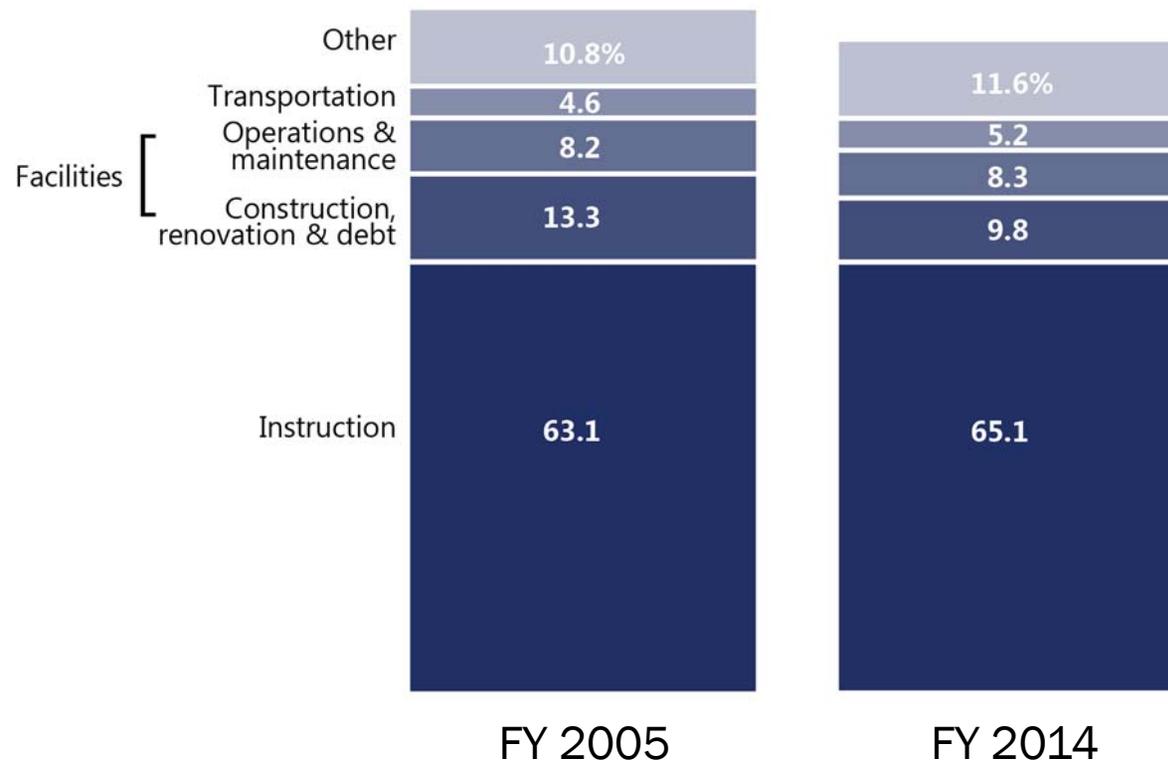
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Instruction now accounts for a higher proportion of total spending

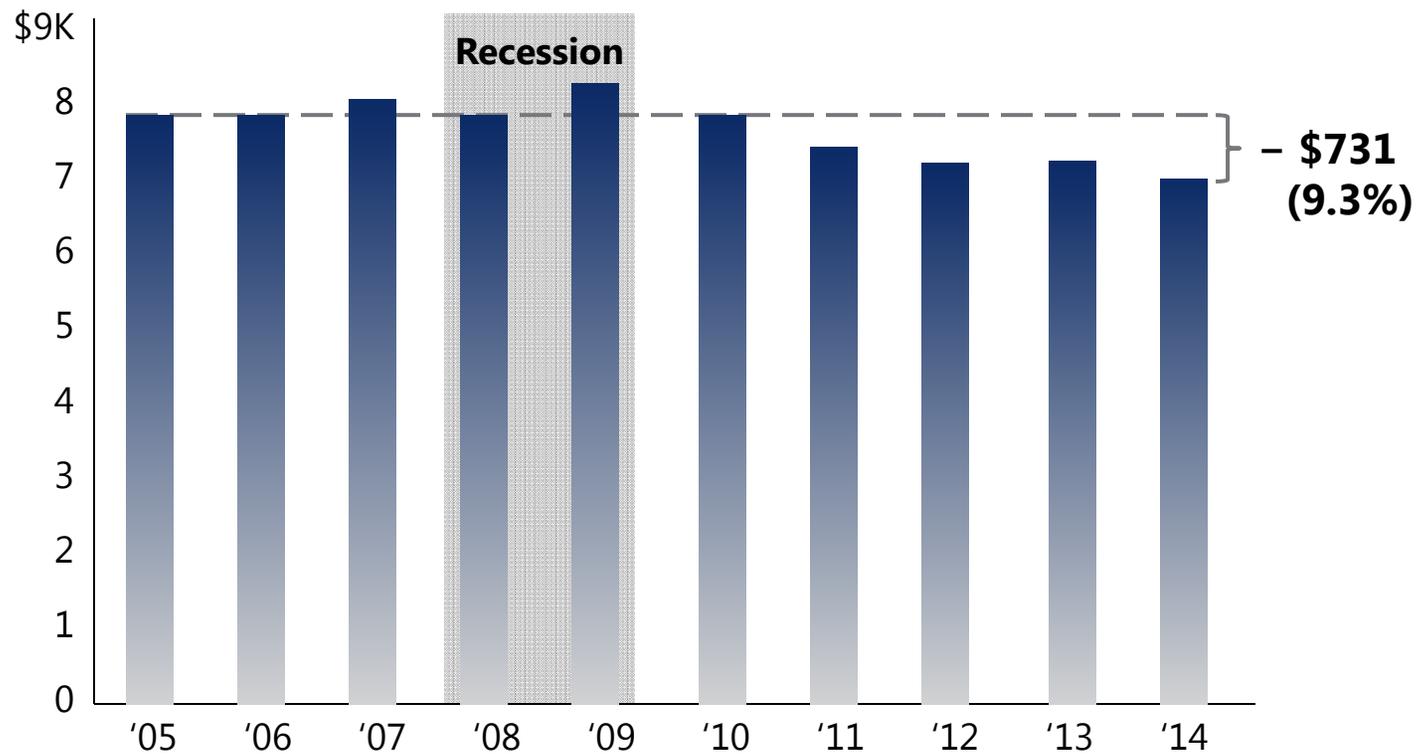


Percentage of total spending

Divisions spent 9% less on instruction

(FY 2005–FY 2014)

Average per student
(inflation-adjusted)



Divisions used several approaches to reduce instructional spending per student

- Employing fewer teachers per student
- Limiting salary growth
- Requiring teachers to pay a higher percentage of benefit costs

Divisions report reduced spending hindered instructional effectiveness

- Divisions report more difficulty providing quality instruction with larger class sizes
 - Rising percentage of students with limited English proficiency and living in poverty
- Lower salary increases and reduced benefits may have hindered teacher recruitment and retention
- Reduced instructional support may be hindering instructional effectiveness

Recommendation

The General Assembly may wish to consider amending the Code of Virginia to require the Superintendent of Public Instruction to track teacher turnover.

Option

The General Assembly could appropriate funds to VDOE for additional state staff to provide teacher support to school divisions in most need of assistance.

Divisions spent less on facilities and about the same on transportation (FY 2005–FY 2014)

- Divisions spent
 - 7.9% less to operate and maintain facilities
 - 31% less to renovate and construct facilities
- Transportation spending stayed the same despite rising fuel costs
 - Fuel prices increased 92%

Divisions reported some approaches used hindered efficiency and effectiveness

- 75% of divisions deferred non-emergency facilities maintenance
 - Divisions report increased costs, more system failures, and inadequate technology infrastructure
- Nearly 80% of divisions deferred bus purchases
 - Divisions report increased costs and lower reliability
 - No measurable impact on safety yet

Not all divisions used best practices that can improve facilities and transportation efficiency

Operation	Best practice	# of divisions NOT using
Facilities	Utility efficiency measures	17
	Outsourcing/collaborating on services	60
	Closing/consolidating under-used schools	21
Trans- portation	Bus routing software	40
	GPS tracking	75
	Adjustment of bus routes	24

Recommendations

VDOE should provide facilities management and transportation management expertise to school divisions. Expertise should include guidance and information about best practices.

The General Assembly may wish to consider appropriating funds for VDOE to employ up to three facilities staff, and up to three transportation staff, to provide expertise.

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