

# SOQ Re-benchmarking and Teacher Supply & Demand Issues

November 17, 2017

# Overview

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- The General Assembly is responsible for determining costs and state/local shares of elementary and secondary education.
  - This is operationalized as the Standards of Quality (SOQ) framework, which determines number of staff needed, total costs, and divides shares via the Composite Index.
- The number of teachers and teacher salary levels together are the largest component of education costs.
- Biennial SOQ re-benchmarking is the technical updating of the model for more recent data.
  - The on-going cost of the 2 percent salary increase in FY 2018 is the largest component of the current preliminary roughly \$400 million cost for the 2018-20 biennium.
- Teacher supply and demand is a complex equation involving licensure/preparation, compensation, working conditions, and class size and will require multiple approaches to address.

# Part I:

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SOQ Funding Framework



2018-20 Biennium Re-benchmarking

## Virginia's Constitution Tasks the General Assembly With Determining Education Costs and Shares

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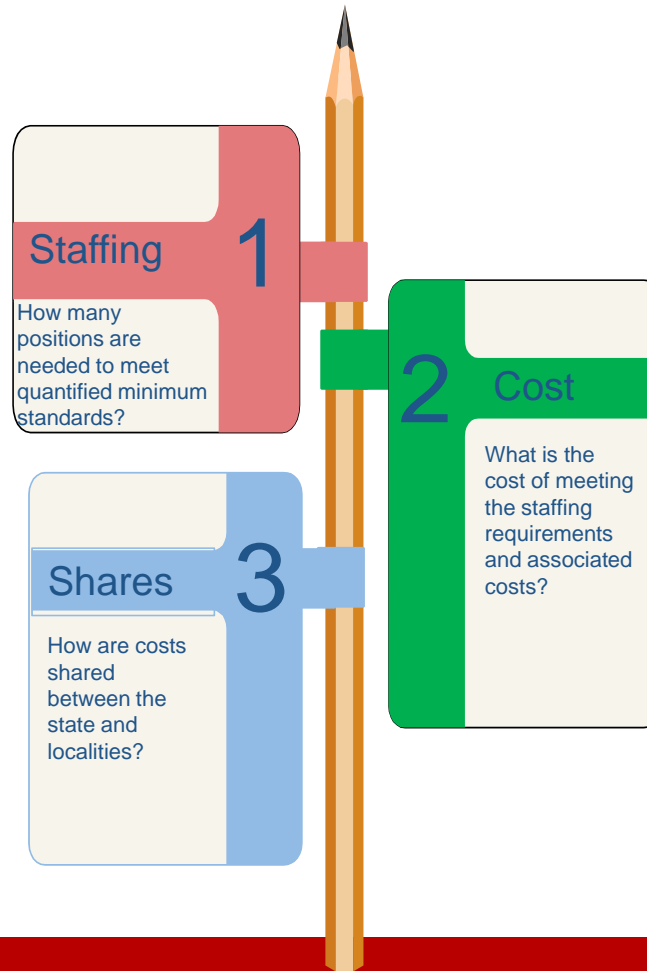
- Pursuant to the Constitution of Virginia, public education is a shared responsibility of the state and localities.
- **Article VIII, Sections 1 and 2:**
  - The General Assembly has responsibility to provide a system of free public schools for all children and to ensure that an educational program of high quality is established and continually maintained.
  - The State Board of Education must prescribe the Standards of Quality (SOQ) for the school divisions, subject to revision only by the General Assembly.
  - The General Assembly decides what the costs are and how they will be shared between the state and localities.

# SOQ Funding Framework

Based on the number of students enrolled by school by grade.

Of the recognized costs, average state share is 55 percent, based on the Composite Index.

*A key exception is the distribution of sales tax based only on school-aged population (NOT equalized through Composite Index).*



Since spending in part reflects local decisions, rather than simply reimburse spending, the model is intended to recognize reasonable costs based on what most school divisions spend, **with some adjustments.**

# I) Staffing is Funded Based on Minimum Standards, Not Actuals

Historically, SOQ Has Funded Less Than 70% of Actual Reported Positions

Basic Instructional Standards in Standard 2 of the Standards of Quality Funded through SOQ Basic Aid								
Maximum Class Sizes & Schoolwide/Divisionwide Ratios					School-level Positions Staffing			
Grade	Maximum Class Sizes	Pupil-Teacher Ratio	Divisionwide Pupil-Teacher Ratio	Divisionwide English Pupil-Teacher Ratio	Guidance Counselor	Librarian	Assistant Principal	Principal
K	24; 29 w/aide		24 to 1		<i>Elementary School Positions:</i>			
1	30				.20 per 100 students (500 to 1)	less than 300 students = .50; 300 or greater students = 1.0	less than 600 students = 0.0; 600 to 899 students = .50; 900 or greater students = 1.0	less than 300 students = 1.0
2	30							
3	30							
4	35							
5	35	21 to 1	25 to 1		<i>Middle School Positions:</i>			
6	35				.20 per 80 students (400 to 1)	less than 300 students = .50; 300 to 999 students = 1.0; 1,000 or greater students = 2.0	less than 600 students = 0.0; 1.0 per each 600 students	1.0
7	35							
8								
9								
10				24 to 1	<i>High School Positions:</i>			
11					.20 per 70 students (350 to 1)	less than 300 students = .50; 300 to 999 students = 1.0; 1,000 or greater students = 2.0	less than 600 students = 0.0; 1.0 per each 600 students	1.0
12								

\*Funding for Basic Instructional Standards includes a minimum floor number of positions of 51 per 1,000 students.

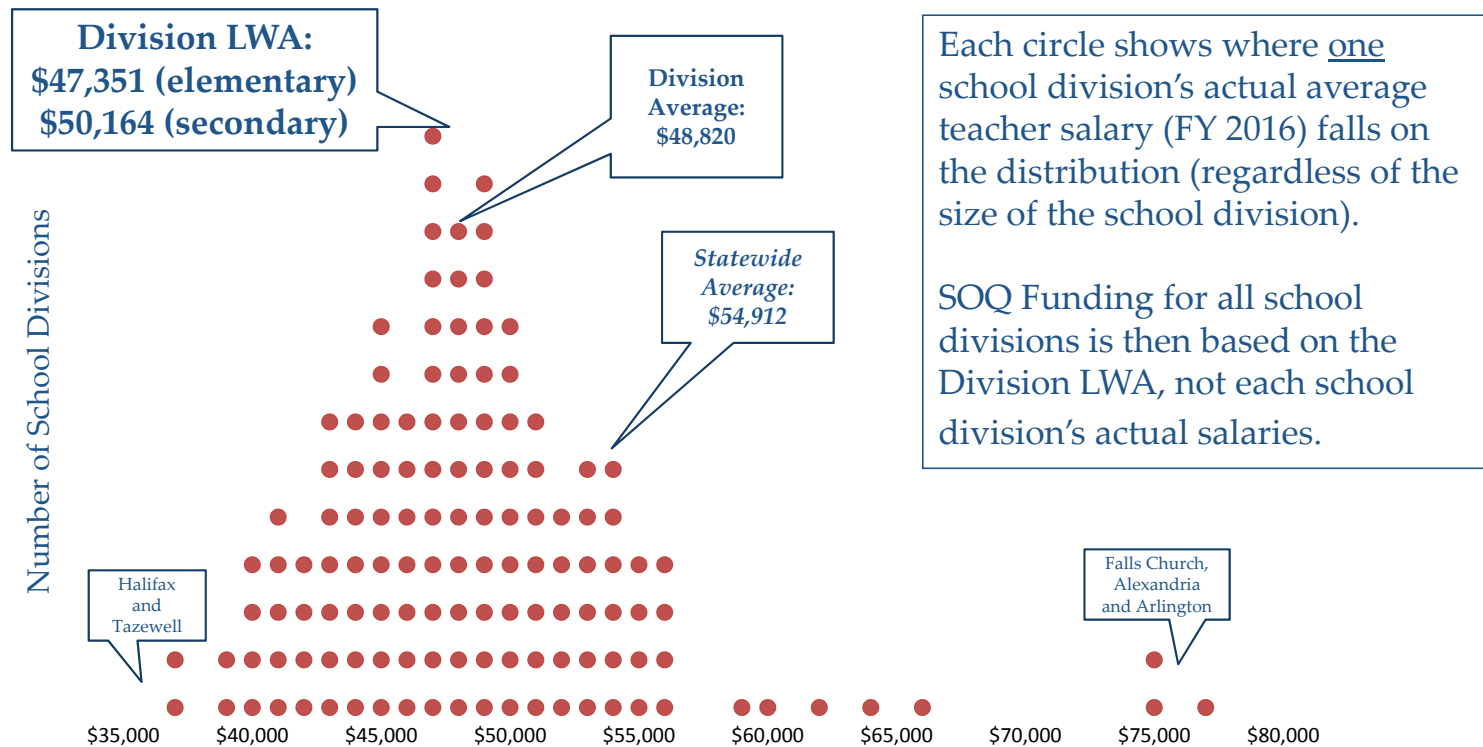
**Other funded divisionwide SOQ standards:**

5.0 elementary resource teachers in art, music, and physical education per 1,000 students in grades kindergarten through 5.

1.0 technology support position and 1.0 instructional technology position per 1,000 students in grades kindergarten through 12.

## 2) Funded Salaries, and Other Costs, are Based on Prevailing Cost

- Since the mid-1980s, the SOQ funding framework has relied on a Linear Weighted Average (LWA), with the division as the unit of analysis, as the best measure of “expenditure levels around which most school divisions tend to cluster.”



## Base Year Prevailing Salaries are Adjusted for State-supported Compensation Supplements, If Any

Elementary Teachers*	2016-18	2018-20	Percent Increase
Prevailing Salary	\$46,488 (FY 2014)	\$47,351 (FY 2016)	1.9%
Compensation Supplements FY 15 = 0% FY 16 = 1.5%  FY 17 = 0% FY 18 = 2% (Feb.)	+1.5%	+2.0%	
Funded Salary	\$47,185	\$48,298	2.4%

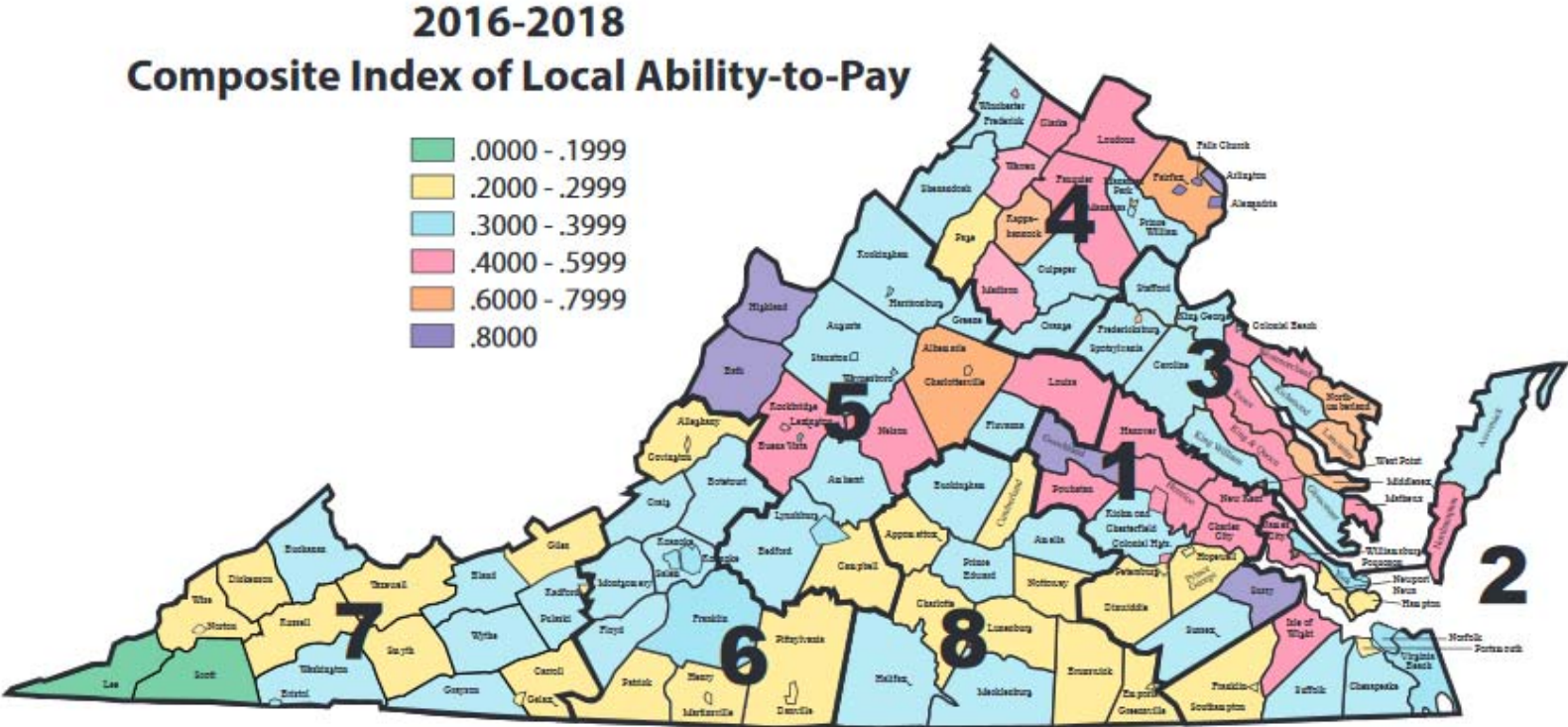
\*Note: Separate funded salary amounts are calculated for: elementary teacher, elementary assistant principal, elementary principal, secondary teacher, secondary assistant principal, secondary principal, and instructional aide.

← Updating all instructional and support positions costs \$85 million.

← Updating instructional and support positions costs \$165 million.

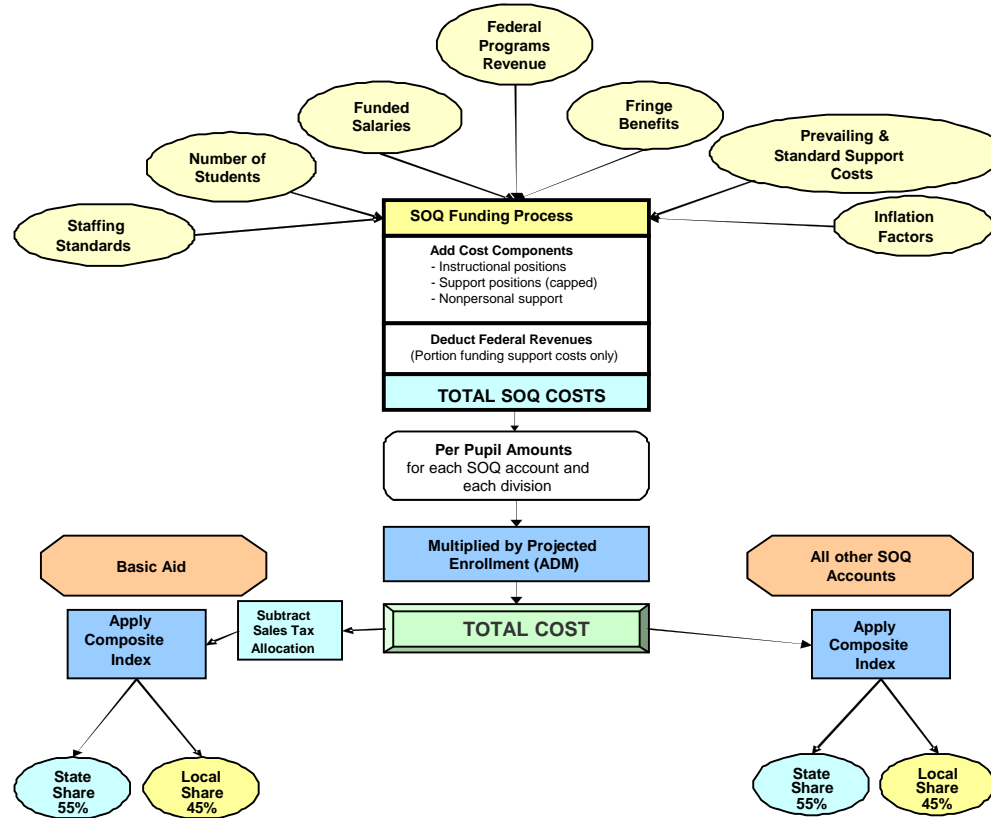


# 3) State/Local Shares Vary Based on Composite Index



**NOTE:** Commonwealth of Virginia Department of Education Superintendent's Regions 1-8 shown

# Other Cost Drivers in the SOQ Funding Equation

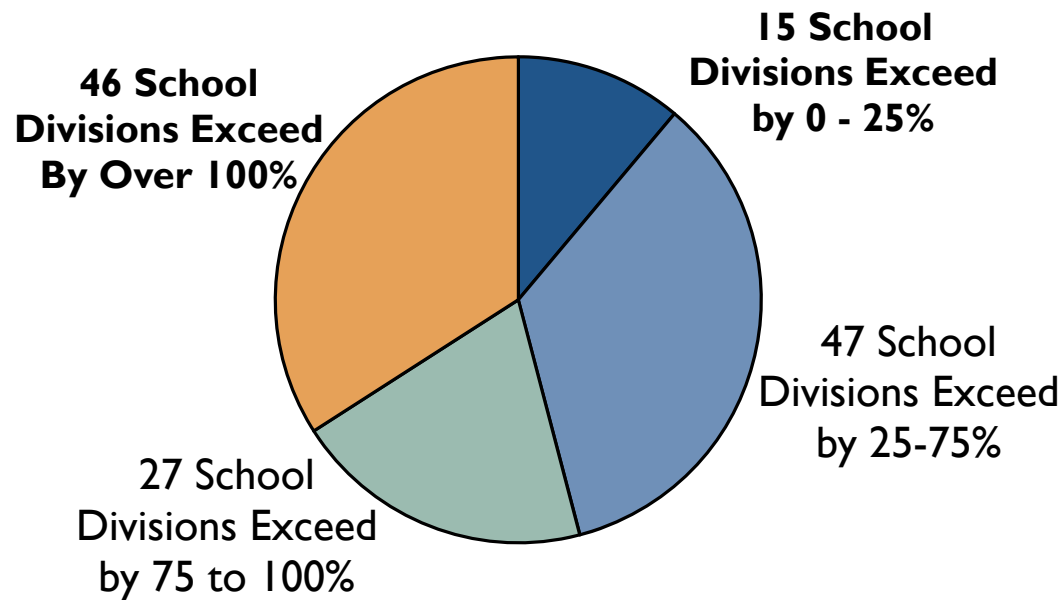


Source: VDOE

# In Addition to Determining State Costs, SOQ Model Also Drives Required Local Effort Levels

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## Percent By Which School Divisions Exceed State's Required Local Effort Levels FY 2016



## Virginia's Rank on State & Local Funding is Consistent with its Rank on Average Teacher Salary

	Virginia	50-State Average	Virginia's Rank
<b>Funding Levels</b>			
State Per-Pupil Funding (2013-14)	\$4,708	\$6,650	38 <sup>th</sup>
State and Local Per-Pupil Funding (2013-14)	\$11,054	\$11,954	26 <sup>th</sup>
<b>Key Cost Drivers</b>			
Student-Teacher Ratio (2014)	13:1	16:1	
Average Teacher Salary (2014-15)	\$50,620	\$54,663*	29 <sup>th</sup>
<b>Adult Educational Attainment</b>			
% with at Least H.S. Equivalent (2015)	88.9%	88.7%	27 <sup>th</sup>
% with at Least Bachelor's Degree (2015)	37%		9 <sup>th</sup>
<p><b>Source:</b> JLARC, <i>Virginia Compared to Other States</i>, 2017 Edition            *Note: The nationwide average was \$57,420, higher than the 50-state average due to high salaries in several large states.</p>			

## Local Average Annual Growth Has Exceeded State, FY 07 – FY 16

	FY 2007	FY 2016	% Change	Avg. Ann. % Change
<b>State</b>	\$5,616.2	\$6,202.2	10.4%	1.1%
<b>Local</b>	6,114.8	7,782.6	27.3%	2.7%
<b>Federal</b>	<u>848.3</u>	<u>1,038.1</u>	<u>22.4%</u>	<u>2.3%</u>
<b>All Sources</b>	<b>\$12,579.2</b>	<b>\$15,022.9</b>	<b>19.4%</b>	<b>2.0%</b>
Source: VDOE, Superintendent's Annual Reports				

# 2018-20 Biennium Re-benchmarking

State Direct Aid to Public Education	FY 2018 (\$ in millions)
<b>Standards of Quality (SOQ) Accounts</b> Basic Aid (\$3.2B), Sales Tax (\$1.4B), Textbooks, CTE/Gifted/Special Ed/ Intervention, VRS/Social Security/Group Life, English as a Second Language, Remedial Summer School	\$5,962.7
<b>Lottery Proceeds-Funded Accounts</b> Regional Special and Alt. Ed, K-3 Class Size, Preschool, At-Risk Add-On, Algebra Readiness, Early Intervention Reading, Project Graduation, CTE Equipment, School Breakfast	\$546.5
<b>Other Incentive Accounts (generally optional to locals with required match)</b> <i>Compensation Supplement (\$31.7M)</i> , Governor's Schools (\$18.4M), Math/Reading Instructional Specialist, Special Education Regional Tuition, School Breakfast	\$165.0
<b>Categorical Accounts (generally required by federal or state law)</b> Special Ed State Operated Programs (\$35.6M), Adult Education, School Lunch, Virtual Virginia	\$59.1
<b>Supplemental Accounts (often go to entities other than school divisions)</b> Extended School Year Grants (\$7.8M), <i>National Board Certification Bonuses (\$5.1M)</i> , <i>Teacher Recruitment &amp; Retention Grant Programs (\$1.9 million)</i> , <i>Teach for America (\$0.5 million)</i> , Communities in Schools, Project Discovery, Jobs for Virginia Graduates, CTE Resource Center, GRASP, Regional Consortia	<u>\$28.3</u>
	<b>\$6,761.5</b>

## 2018-20 K-12 Re-benchmarking

- Re-benchmarking is the formula-driven (“technical”) cost adjustment to meet the SOQ minimum staffing requirements and related support services and updates, derived from updating FY 2014 to FY 2016 base year actual data.

(\$ in millions)		Preliminary Estimate (Sept.)	Other Updates To-Date	Revised Total	Percent Increase Over Prior Year
FY 2018 Base Budget	\$6,761.5				
FY 2019		235.0	(54.4)	180.6	2.7%
FY 2020		<u>256.8</u>	<u>(41.4)</u>	<u>215.4</u>	0.5%
<b>Biennial</b>		<b>\$491.8</b>	<b>(\$95.8)</b>	<b>\$395.9</b>	



# K-12 Re-benchmarking

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- Additional funding of about \$396 million for the biennium (still preliminary).
  - Partial estimate for re-benchmarking (as presented to SFC on October 19, based on first 26 steps) of \$492 million, reflected salaries (\$250 million), health insurance (\$58 million), inflation (\$91 million), textbooks (savings of \$14 million), and preliminary ADM enrollment projections.
  - Preliminary savings for updated Composite Index and Average Daily Membership enrollment.
  - Offset by \$42 million for VRS and Retiree Health Care Credit rates.
  - \$80 million in additional NGF Lottery Proceeds available to fund education programs.
- Other adjustments will likely include annual assumed savings from Virginia Preschool Initiative slots.

## Net Increase Reflects Several Increases Partially Offset By Some Decreases

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### Updates that **Decreased** State Cost Below FY18 Base:

- Support to Instructional Position Ratio Cap
- Textbooks Per Pupil Amount
- Pupil Transportation Costs
- Federal Revenue Deduct Per Pupil Amount
- Division SOL Tests Failure Rates

### Updates that **Increased** State Cost Above FY18 Base:

- Base-year and Funded Instructional and Support Salaries
- Enrollment Projections – ADM, Fall Memb., ESL, and Remedial Summer School
- Base-year Non-personal Support Costs
- Non-personal Costs Inflation Factors
- Health Care Premium per Position
- Special Education Child Counts
- CTE Course Enrollment
- Cost of Lottery Programs
- Free Lunch Eligibility %'s

Source and Link to DOE presentation:

[http://sfc.virginia.gov/pdf/committee\\_meeting\\_presentations/2017%20Interim/101917\\_No2\\_DOE%202018-2020%20Rebenchmarking.pdf](http://sfc.virginia.gov/pdf/committee_meeting_presentations/2017%20Interim/101917_No2_DOE%202018-2020%20Rebenchmarking.pdf)

# Recent Budget Issues and 2018 Outlook

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## 2016 Session

- Phase-in of VRS rates,
- At-risk add-on,
- Cost of competing adjustment,
- Governor's Schools formula,
- CTE equipment,
- Early childhood, and
- **Alternative teacher compensation.**

## 2017 Session

- Enrollment Loss,
- **2% salary increase,**
- Lottery per pupil amount, and
- **Teacher residency programs.**

## 2018 Session Outlook

- Board of Education Proposed Revisions,
  - Including counselors, psychologists, social workers, and nurses.
- Special Education Regional Tuition,
- Early Childhood (Dec. 2017 JLARC),
- H.S. Redesign and Dual Enrollment,
- Virtual Education and Charter Schools,
- Joint Committee on the Future of Elementary & Secondary Education, and
- **Teacher Supply and Demand Issues.**

Part 2:  
Overview of  
Teacher Supply & Demand Issues

## What's the Issue?

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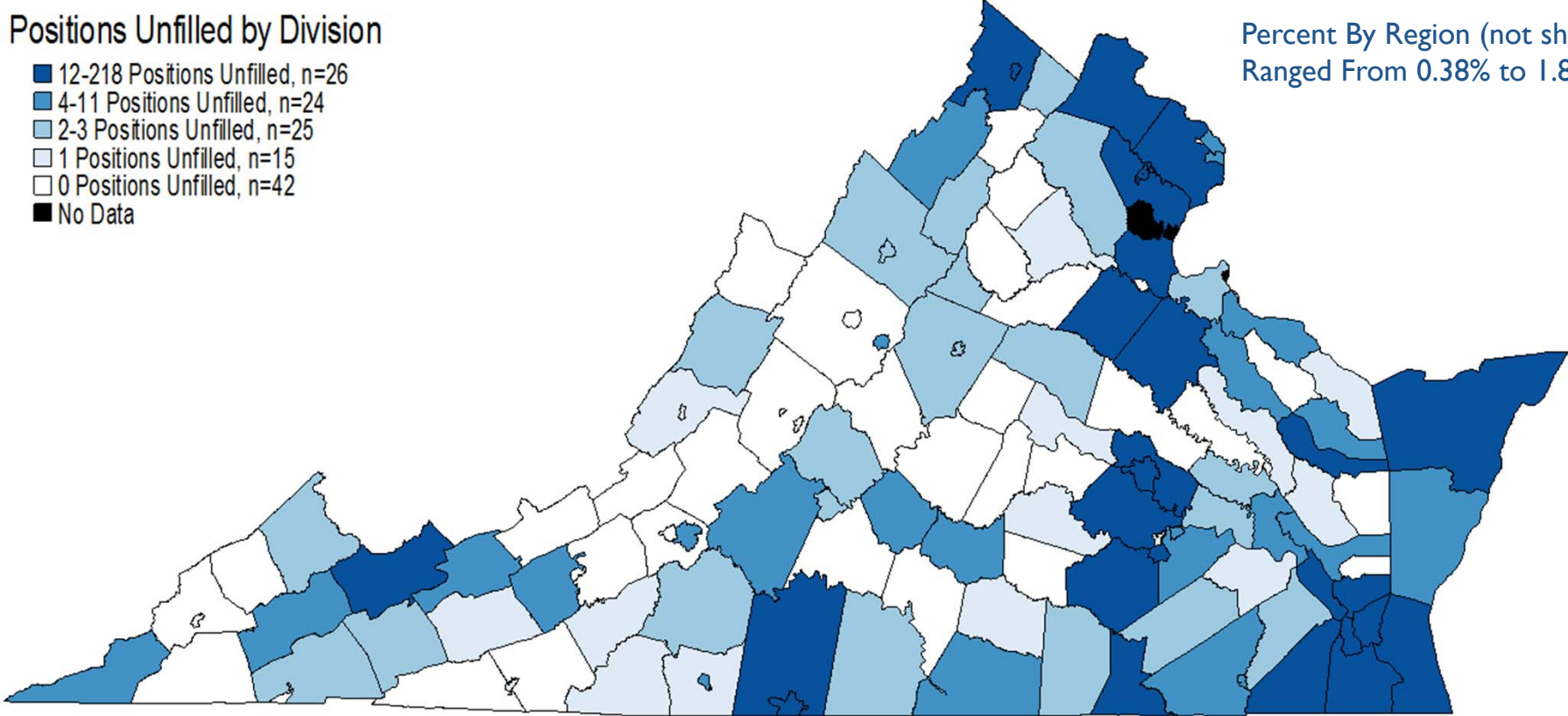
- Some localities face challenges in hiring enough qualified teachers.
  - Example: In Central Virginia, Petersburg and Richmond each had more than 50 unfilled teaching positions as the school year opened.
- Since teachers are central to education -- recruiting, retaining, and rewarding effective teachers is at the core of the success of the enterprise.
- Teacher supply and demand is a complex equation involving licensure/preparation, compensation, working conditions, and class size.

# Over 1,000 Unfilled Positions

## Positions Unfilled by Division

- 12-218 Positions Unfilled, n=26
- 4-11 Positions Unfilled, n=24
- 2-3 Positions Unfilled, n=25
- 1 Positions Unfilled, n=15
- 0 Positions Unfilled, n=42
- No Data

Percent By Region (not shown)  
Ranged From 0.38% to 1.82%



Source: Virginia Department of Education, September 2017 Presentation (Fall 2016 Data)

## Some School Divisions Have Over 5 Percent Unfilled Positions

### Divisions with Largest Teacher Shortages

Top 10 Divisions with Highest Percent of Unfilled Positions vs. Highest Number of Unfilled Positions  
2016-2017

Top 10 Divisions with Highest % Unfilled Positions	2016	
	Shortage %	# Unfilled Positions
Middlesex Co Pblc Schs	20.3%	20
Petersburg City Pblc Schs	13.9%	47
Danville City Pblc Schs	10.1%	47
Bland Co Pblc Schs	8.6%	6
Greensville Co Pblc Schs	6.7%	13
Caroline Co Pblc Schs	5.4%	13
Martinsville City Pblc Schs	4.9%	9
Appomattox Co Pblc Schs	4.5%	8
Bath Co Pblc Schs	4.4%	3
Dinwiddie Co Pblc Schs	4.4%	15

Top 10 Highest Divisions with Highest # of Unfilled Positions	2016	
	# Unfilled Positions	Shortage %
Fairfax Co Pblc Schs	218	1.4%
Prince Wm Co Pblc Schs	61	1.0%
Richmond City Pblc Schs	53	3.2%
Norfolk City Pblc Schs	53	2.2%
Petersburg City Pblc Schs	47	13.9%
Danville City Pblc Schs	47	10.1%
Suffolk City Pblc Schs	44	4.0%
Loudoun Co Pblc Schs	34	0.6%
Chesapeake City Pblc Schs	24	0.9%
Portsmouth City Pblc Schs	23	2.2%

Source: Preliminary Report from the Advisory Committee on Teacher Shortages, October 2017

# Areas of Concern Related to Recruitment and Retention

- 2015 legislatively-requested study of shortages of qualified teachers, generally and in certain endorsement areas by VDOE/SCHEV.
  - Impact of teacher turnover.
  - Recommended local “Grow Your Own” and “Teach for Tomorrow” programs targeting high school students.
- Spring 2017, VDOE/SCHEV (Cannaday-Minor) working group on Teacher Shortages.

Area of Concern	Reason for Concern
<b>Pathways</b>	The current pathways are cumbersome and impractical for the modern needs of our schools.
<b>Transition/ Induction</b>	New teachers need help with management strategies, curriculum development and navigating the administrative side of teaching as they transition from the classroom to teaching.
<b>Compensation</b>	There are few financial incentives attracting candidates to the teaching profession and inadequate incentives enticing teachers to remain in the field. <b>Student loan debt is also a major factor for graduates looking to enter the workforce.</b>
<b>School Climate</b>	Working conditions play a significant role in attrition, transferring to other schools, or leaving the profession entirely.
<b>Retention</b>	While teacher retention is challenging in many of Virginia’s school divisions, <b>teacher attrition is particularly acute in some schools and subject areas.</b>

Source: Preliminary Report from the Advisory Committee on Teacher Shortages, October 2017



## There is Concern about Declining Enrollment in Teacher Education Nationally and Potentially in Virginia



Source: October 24, 2017 VDOE Presentation

# Pathways

## Issue of Undergraduate Programs with Education Majors (vs. Arts & Sciences Majors)

Public Colleges	PreK-6	Private Colleges	PreK-6	Private (continued)	PreK-6
CNU	G	Sweet Briar	G	Lynchburg	U
GMU	G	Emory & Henry	U,G	Randolph	U
JMU	G	Hampton	U,G	Randolph Macon	U
ODU	G	Hollins	U,G	Roanoke	U
UMW	G	Liberty	U,G	Univ. of Richmond	U
UVA	G	Mary Baldwin	U,G	Virginia Union	U
VCU	G	Marymount	U,G	Virginia Wesleyan	U
VT	G	Regent	U,G	Washington & Lee	U
CWM	U,G	Shenandoah	U,G	G = Graduate Program U = Undergraduate Program  Source: SFC Staff Analysis of VDOE, October 27, 2017 Report	
LU	U,G	Averett	U		
NSU	U,G	Bluefield	U		
RU	U,G	Bridgewater	U		
VSU	U,G	Eastern Mennonite	U		
UVA-W	U	Ferrum	U		

## Virginia Needs to Examine the Multiple Factors That Influence a State's Teacher Supply & Demand

Selected Indicators, Selected States	Compensation		Teacher Turnover	Working Conditions			Teacher Qualifications	Index of Key Factors	
	Average Starting Salary (2013)	Wage Competitiveness Ratio (Teachers to Non-Teachers) (2012)	% Planning to Leave As Soon As Possible (2012)	% Who Feel Supported by Admin. (2012)	% Worried About Job Security Because of Testing (2012)	% Who Feel Autonomy in Their Classroom (2012)	Pupil-Teacher Ratio (2014)	% of Teachers Not Certified (2014)	Teaching Attractiveness Rating
PA	\$41,901	80	4.4	45	13	76	14.5	0.5	3.9
Mass.	\$40,600	69	3.5	45	7	78	13.6	2.4	3.2
NC	\$30,778	67	9.2	53	9	69	15.4	0.3	2.7
<b>VA</b>	<b>\$37,848</b>	<b>63</b>	<b>10.2</b>	<b>48</b>	<b>8</b>	<b>65</b>	<b>14.1</b>	<b>3.5</b>	<b>2.6</b>
FL	\$35,166	73	9.3	52	25	58	15.3	4.2	2.3
MD	\$43,235	75	10.9	41	15	59	14.8	3.2	2.2
<b>US</b>	<b>\$36,141</b>	<b>74</b>	<b>6.6</b>	<b>48</b>	<b>12</b>	<b>77</b>	<b>16.1</b>	<b>1.9</b>	<b>-</b>

SFC Staff Analysis of Appendix B: State Indicators Influencing Supply and Demand, Learning Policy Institute, September 2016.

# Advisory Committee on the Teacher Shortage (ACTS)

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- October 2017 report: “An array of initiatives is needed to address the multifaceted root causes of teacher shortages.”
- 5 priority recommendations from among the 31 listed:
  - 1) Stackable pathways from middle school into the profession (including dual enrollment),
  - 2) Four-year undergrad major in teaching,
  - 3) Awareness of federal loan forgiveness and income-driven repayment (IDR) programs,
  - 4) Establish a Commonwealth Teaching Fellows Program (competitive scholarship, serve in high need areas), and
  - 5) State funding for differential compensation or retention bonuses.
- Areas for further study next year
  - Mentorship and principal training programs.

# What Can/Should the State Do?

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- **Gain better understanding of the multiple causes and the extent of the issue.**
  - Are vacancies “just the beginning” of more widespread shortages of effective teachers, or are they mostly a symptom of challenged, low-performing school divisions?
- **In the meantime, build on, refine and re-evaluate the effectiveness of things Virginia has already done. Options include:**
  - Revamp the Virginia Teaching Scholarship Loan Program.
  - Continue to support Teacher Residency Programs that prepare committed students and other alternative programs like Career Switchers, Teach for America, and the Virginia Reading Corps in attracting graduates to the profession.
  - Re-institute the Great Virginia Teach-In recruitment fair or similar regional fairs.
  - Evaluate impact of different approaches to Compensation.
  - Use distance learning where possible to link available, qualified teachers with classroom needs.
- **As Virginia continues to explore new approaches for the future of elementary and secondary education, develop longer-term strategies for elevating the teaching profession, including maximizing the impact of the very best teachers and providing schools and districts with results-based flexibility.**