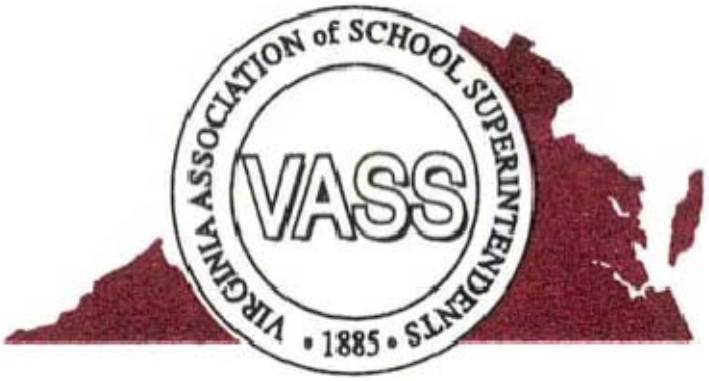

Educational Reform in Virginia: *Blueprint for the Future of Public Education*

"Creating Virginia's Future in Public Education"

PK-12 Public Education Strategic Plan

PRESENTED: OCTOBER 12, 2011

VIRGINIA ASSOCIATION OF SCHOOL SUPERINTENDENTS

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Executive Summary

The Virginia Association of School Superintendents (VASS) is a professional organization dedicated to the mission of providing leadership and advocacy for public school education throughout the Commonwealth of Virginia. The "*Blueprint for the Future of Public Education"* is a pro-active education reform plan developed by VASS to:

- create a public education system that better prepares Virginia's students for success in globally competitive jobs and in higher education;
- frame the debate on education issues and the funding necessary to both sustain and increase the accomplishments that have been made;
- focus the attention of policymakers on what will make a difference in student achievement;
- establish and maintain direction for public education; and,
- galvanize support of stakeholders who will enable continuous forward momentum for improvement in the quality of public education.

The "*Blueprint"* contains five key areas of strategic focus:

1. Prepare all students to be college and career ready (Curriculum/Readiness)
2. Measure student progress and achievement through a variety of assessments not limited to standardized, multiple choice tests (Assessment)
3. Use evidence-based teaching and learning models that meet individual needs of diverse students (Instructional Delivery)
4. Recruit, develop, and maintain effective and technically-proficient teachers, administrators, and classified staff (Human Capital)
5. Ensure the Commonwealth meets its financial responsibility in providing public education and promoting economic development (State's Role in Funding Public Education)

"The economic vitality, democratic health and future of our communities, state, and nation depend upon the capacity of today's students to become tomorrow's extraordinary leaders, high performance workforce, and contributing citizens."

Goal 1: Prepare all students to be college and career ready (Curriculum/Readiness)

Key Strategies

- Integrate rigorous content with performance competencies
- Use multiple measures to assess students' performance on contemporary college and career readiness standards
- Ensure all students experience grade-appropriate career development experiences

"The benefits of established standards and criterion-referenced assessments (SOL tests) as a means to raise student achievement in Virginia have been significant but are no longer sufficient."

Goal 2: Measure student progress and achievement through a variety of assessments not limited to standardized, multiple choice tests (Assessment)

Key Strategies

- Identify and implement a variety of assessments to measure student growth that may include case analyses, problem-based projects, collaborative presentation, and community review of work
- Identify and secure state-wide pricing for assessments that measure student growth
- Provide web-based tool for sharing assessments, rubrics, and curriculum materials

"Virginia's students are entitled to high quality educational services that develop students' core academic skills, critical-thinking, problem-solving, collaboration, communication, and technology skills (21st century learning)."

Goal 3: Use evidence-based teaching and learning models that meet individual needs of diverse students (Instructional Delivery)

Key Strategies

- Secure funding and access to virtual curriculum
- Ensure use of evidence-based high-yield teaching and learning strategies
- Remove calendar and schedule barriers related to the start of school and clock hour requirements to provide flexibility in teaching and learning
- Implement a tiered instructional model in mathematics and reading utilizing formative assessment and appropriate interventions

"The core of education is teaching and learning, and the teaching-learning connection works best when school divisions have effective teachers working with every student every day."

Goal 4: Recruit, develop, and maintain effective and technically-proficient teachers, administrators, and classified staff (Human Capital)

Key Strategies

- Improve competitiveness of salary and benefits
- Develop and implement incentive programs
- Improve timeliness of student achievement and other performance indicators for use in evaluation of teacher effectiveness
- Extend probationary period for teachers
- Support evidence-based, locally-developed differentiated compensation models

"Localities already shoulder a much larger portion of PK-12 expenditures than intended by state policy."

Goal 5: Ensure the Commonwealth meets its financial responsibility in providing public education and promoting economic development (State's Role in Funding Public Education)

Key Strategies

- Re-examine state mandates and cost burden to localities, eliminating unfunded mandates
- Improve funding disparity between localities
- Ensure financial solvency of the Virginia Retirement System

Foreword

Founded in 1885, VASS has provided educational leadership in Virginia for more than a century and will continue to be a prominent leader on issues that affect educators across the Commonwealth. VASS membership is comprised of over 300 educational leaders, including school division superintendents from all regions of Virginia. These members are compelled by a common mission and a sense of urgency to educate each young person in the Commonwealth so that our communities, state, and nation will continue to thrive. This *Blueprint for the Future of Public Education* is a pro-active education reform plan developed by VASS which:

- projects far into the future to create a public education system that better prepares Virginia's students for success in globally competitive jobs and in higher education;
- frames the debate on education issues and the funding necessary to both sustain and increase the accomplishments that have been made;
- focuses the attention of policymakers on what will make a difference in student achievement;
- establishes and maintains direction for public education; and
- galvanizes support of stakeholders who will enable continuous forward momentum for improvement in the quality of public education

The *Blueprint for the Future of Public Education* outlines Goals, Objectives, Strategies and Rationale/Research for five key areas of strategic focus:

Curriculum/Readiness

Assessment

Instructional Delivery

Human Capital

State's Role in Funding Public Education

VASS members stand ready to work collaboratively with other entities across the Commonwealth to achieve the Goals, Objectives, and Strategies contained herein and "**create Virginia's future in public education**."

Mission

The Virginia Association of School Superintendents (VASS) is a professional organization dedicated to the mission of providing leadership and advocacy for public school education throughout the Commonwealth of Virginia.

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Curriculum/Readiness

Goal

All Virginia students will graduate college and career ready.

Objectives and Strategies

In our roles as VASS members and superintendents of school divisions across all regions of Virginia, we believe it is imperative that Virginia develop and commit to a shared vision of the knowledge and skills that students need to know and demonstrate so as to become successful learners, employees, and citizens in the 21st century. Standards, assessments, curriculum, instruction, professional development must be aligned to produce a support system that produces college and career readiness outcomes for today's students.

Objective 1: College and career readiness standards that align with 21st century learning standards will be developed for use by all Virginia school divisions. Additionally, an accountability system that assesses learners' performance on these standards will be developed and piloted.

> Strategy 1A: Define and develop an integrated model of rigorous content and core performance competencies that combines Virginia's excellent content standards and international/21st century performance standards.
>
> Strategy 1B: Develop and pilot an accountability system that assesses learners' performance on college and career readiness standards that benchmark to 21st century learning/international standards.

Objective 2: Students will demonstrate college and career readiness as evidenced by the accountability system aligned with the college and career readiness standards.

> Strategy 2A: Implement an accountability system that assesses learners' performance on college and career readiness standards that benchmark to 21st century learning/ international standards.
>
> Strategy 2B: Create and implement an approach to develop and share across Virginia's school's curriculum, pedagogies, formative assessments and teacher and leader development programs that support implementation of international/21st century performance standards for learners.
>
> Strategy 2C: Create and implement an integrated approach to expose all PK-12 students to grade-appropriate career development experiences.

Rationale

Since the early 1990's, the hyper-development of technology, increased world-wide focus on science, technology, engineering, and mathematics integration (STEM), the developing markets of Europe and the emerging markets of Asia and South America, the outsourcing of U.S. services, and the relocation of American businesses, have combined to change the focus of American public education. It is no longer sufficient for students to demonstrate competence on standardized tests that measure their ability to succeed in a local economy; it has become paramount for American students to acquire the knowledge and skills that will enable them to successfully enter college, the workforce, and compete across the world.

Our young people in today's schools must be able to compete within a workforce that extends well beyond the borders of the United States and collaborate to solve global problems that exist without national boundaries. According to a Weldon Cooper Center paper (Carter and Gunter, 2010) workplace skills considered "much more important now" than two years ago include adaptability, flexibility, critical thinking, problem solving, and information technology application.

As VASS members, we are compelled by our common mission and a sense of urgency to educate each young person in the Commonwealth so that our communities, state and nation continue to thrive.

As VASS members, we believe:

- All learners in our schools today must graduate college ready, career ready, and citizenship ready so they successfully can work in a global workforce and live as productive citizens in today's world.
- The economic vitality, democratic health and future of our communities, state, and nation depend upon the capacity of today's students to become tomorrow's extraordinary leaders, high performance workforce, and contributing citizens.
- Virginia's Standards of Learning Program has created a strong foundation for setting rigorous expectations of what all of our young people can achieve. Standards of Learning assessments are an important part of assessing student achievement. However, these should not be the only assessments. Our educators have risen to the challenge of educating Virginia's young people to these high standards resulting in 98% of our schools meeting full accreditation, an increase of 96% since 1998. There is a need for a new accountability system in Virginia.
- To move our young people forward from content competence to performance excellence, we must now develop and assess using 21st century/international benchmarks that go well beyond the expectations of current standards.

Assessment

Goal

School divisions will use multiple and balanced assessments to measure student growth and achievement.

Objectives and Strategies

Objective 1: School divisions will have the flexibility to measure student progress and achievement throughout the year using multiple, authentic assessments.

Strategy 1A: Identify and promote the use of balanced assessments which would include the Standards of Learning (SOL) tests; College and Work Readiness Assessment (CWRA); student portfolios; problem-based projects; collaborative presentations; and community review of student work.

Strategy 1B: Provide a state developed and supported portal so that school divisions can share assessments, rubrics, and curriculum materials.

Strategy 1C: Identify and secure state-wide pricing for assessments that measure student growth.

Strategy 1D: Provide state supported access to statistical analysis and reporting tools.

Strategy 1E: Allow for appropriate assessments that measure growth of English Language Learners.

Strategy 1F: Reduce the role of criterion-referenced assessment.

Rationale

In the late 1990's, the Commonwealth of Virginia was a pioneer in the standards-based accountability movement. The benefits of established standards and criterion-referenced assessments (SOL tests) as a means to raise student achievement in Virginia have been significant but are no longer sufficient. If the Commonwealth's decade-old accountability model is left unchanged, we will continue to have an incomplete picture of student learning. VASS members support the development of a next generation balanced accountability system that includes multiple valid student performance indicators including growth, achievement, and career readiness.

All parents want to know how much their child has progressed in a given year or over the term of a specific course. Teachers long to celebrate how far and how fast students in their charge have learned. Reporting student proficiency on one-time summative assessments can accomplish neither. While we will always need to know how students are performing relative to a standard, an additional set of tools and techniques is necessary for use to reliably measure and report student growth.

Instructional Delivery

Goal

Virginia's students will benefit from instructional delivery models supported by evidence-based research that are flexible enough to accommodate diverse learners and broad enough to maximize students' learning styles.

Objectives and Strategies

Objective 1: Virtual curricula will be available for students.

> Strategy 1A: Provide funding to support virtual programs in the form of materials, hardware, software, space, and personnel to school divisions in order that all schools, regardless of size, can offer instructional alternatives to students.

Objective 2: Teachers' and school leaders' knowledge and practice of evidence-based high yield strategies in classrooms will be enhanced through high-quality professional development programs.

> Strategy 2A: Fund professional development opportunities for teachers to expand and improve their knowledge of evidence-based instructional strategies and provide time for teachers to practice, self-reflect, and collaborate with peers and school leaders.

Objective 3: School leaders will design effective learning schedules to improve student and teacher performance, and improve the use of time through a more flexible school schedule.

> Strategy 3A: Provide flexibility for school divisions to start school before Labor Day and support to extend the school year to meet individual student needs.

> Strategy 3B: Support competency-based instructional models.

Objective 4: The *tiered instructional model* for serving children in reading and mathematics in grades PK-12 will be supported and expanded in all school divisions. This intervention model focuses on core curriculum and tiered interventions by using formative assessments throughout the year that guide instruction.

> Strategy 4A: Increase professional development for localities to implement and expand the *tiered instructional model* methodology. Provide improved funding for reading and math specialists to support classroom teachers in providing tiered intervention as part of the *tiered instructional model* delivery structure.

Rationale

Virginia's students are entitled to high quality educational services that develop students' core academic skills, critical-thinking, problem-solving, collaboration, communication, and technology skills (21st century learning). Upon completion of Virginia's PK-12 requirements, students will be prepared for further education (including technical education) and employment. Having Virginia's students become lifelong learners who are capable of a successful transition into post secondary education, an evolving workforce in the 21st century, and responsible citizenship will require a focus on supporting evidence-based practices pertaining to instructional delivery.

A strong core curriculum and quality teachers are necessary to accomplish the above statement. Targeted school-based professional development to help teachers improve their instructional delivery, quality formative assessments that guide teachers' instructional delivery, and appropriate time and resources at all grade levels to support instructional delivery with intervention services are necessities. Instruction in public schools should be flexible enough to accommodate diverse learners in classrooms and broad enough to provide varied opportunities to maximize students' learning styles.

Improved compensation helps schools attract the best teachers, professional development helps good teachers to become better teachers, and support for school leaders helps to retain the best teachers and improve schools' performance.

Ample research exists and identifies effective classroom practices that have a high probability of improving student performance as described in John Hattie's book, *Visible Learning, A Synthesis of over 800 Meta-Analyses Relating to Achievement* (2009). Helping teachers to increase use and improve delivery of these valid instructional strategies represents an essential priority to improving student performance. These instructional strategies should be emphasized in school improvement plans, in professional development programs to help teachers improve their craft, and in programs that help school leaders become better instructional leaders. Much is known today about the science of teaching and learning; however translating that science into legislation, policy, and practice supported by adequate resources represents a significant challenge. Time, effort and resources should be dedicated to implementing those instructional strategies that will work to improve teaching and learning in Virginia's public schools.

Human Capital

Goal

Develop Virginia's human capital for the provision of high-quality 21st century public education.

Objectives and Strategies

Objective 1: Improve recruitment and retention of teachers, administrators, and classified staff in Virginia.

Strategy 1A: Increase salaries and benefits of all teachers, administrators, superintendents and classified staff so that Virginia will be in the top of its competitive market and in the top 10% in the nation.

Strategy 1B: Strengthen Virginia Retirement System (VRS) as a recruitment incentive by supporting a Joint Legislative Audit and Review Commission (JLARC) study to determine if the General Assembly is complying with its Constitutional obligation of funding the VRS using methods which are consistent with generally accepted actuarial principals; request study to offer a methodology for ensuring adherence to this Constitutional obligation.

Strategy 1C: Provide programs and incentives to encourage high school students to become teachers (e.g. tuition stipends/loan forgiveness, 5-yr teaching commitment, teacher cadet programs), and support efforts to increase enrollment in and completion of teacher education programs within colleges and universities.

Strategy 1D: Support locally developed evidence-based differentiated compensation models.

Objective 2: Improve teacher, administrator, and classified staff performance.

Strategy 2A: Recommend that Board of Education/Department of Education provide assistance during implementation of a fair and uniform evaluation system that provides for timely reporting of student achievement data and other performance indicators to be used as the basis for teacher and administrator evaluation.

Strategy 2B: Pass legislation providing for a five year probation period for first-time teachers and providing a two year probation period for teachers who have continuing contract status but transfer to a new school division.

Strategy 2C: Review current grievance procedures, make recommendations for improvement, and oppose legislation that would add additional grievance actions, reprimands or other criticism placed in personnel files, the contents of any evaluation, transfer within the school division and reduction in force within the school division.

Objective 3: Build local and state capacity to provide professional development support for teachers, administrators, and classified staff.

Strategy 3A: Provide funding for teacher, administrator and classified staff professional development.

Strategy 3B: Create virtual resources for professional development to support instructional delivery/assessment practices.

Strategy 3C: Emphasize professional development using instructional technology to improve student achievement.

Rationale

According to a human capital management study out of the Aspen Institute, [1] research indicates that principals' and teachers' performance has more effect on student achievement than any other factor, [2] [3] and that teachers' effectiveness in increasing student performance varies widely. The variance in teacher effectiveness is largely predicated on poor recruitment systems, overly broad application of professional development, and a lack of incentives for retention.[4] As such, we oppose state promotion and funding of pay for performance models that are not supported by research, are unfair and inequitable, and whose performance evaluations are based on irrelevant and invalid student growth models.

The core of education is teaching and learning, and the teaching-learning connection works best when school divisions' have effective teachers working with every student every day. The quality of an education system cannot exceed the quality of its teachers. Teachers have the challenging task of meeting the educational needs of a diverse student population, and compensation, support, professional development and first-rate evaluation systems are necessary to sustain and improve their efforts.

[1] Wurtzel, J. & Curtis, R. (2008) Human Capital Framework for K-12 Urban Education: Organizing for Success. *The Aspen Institute.* 1.
[2] Chavez, S. (2006). An audit of human capital. *School Administrator, 63*(4), 42-44.
[3] Darling-Hammond, L., & Friedlaender, D. (2008). Creating excellent and equitable schools. *Educational Leadership, 65*(8), 14-21.
[4] Petress, K. (2007). How We Can Attract and Retain Quality Teachers. *Education, Vol. 128.*

In order to provide the highest quality public education that prepares Virginia's students for success in their careers and post-secondary education, school divisions must have the highest quality staff available. Reform efforts should strive to increase the quantity, quality and capacity of educators and administrators as a means to improve student achievement and enhance professional growth. In order to develop Virginia's human capital for this task, incentives, support systems, and policies should be developed to encourage and maintain high performance among teachers, administrators and classified staff. Immediate and long-term objectives should be to improve recruitment, retention, performance, and professional development so that current and future Virginia educators and support staff can attain their greatest potentials.

State's Role in Funding Public Education

Goal

Increase funding for public education to ensure that the state meets its responsibility to provide public education as a core function of state government and to promote economic development in Virginia.

Objectives and Strategies

Objective 1: Require the state to pay its full share for the quality of public education that it requires in the SOQ.

Strategy 1A: Review and update the SOQ to ensure that it reflects the actual costs of providing quality education.

Strategy 1B: Enact a re-benchmarking policy that does not exclude all federal funds.

Strategy 1C: Use the current state budget categories and redefine existing categories including "Administration and Attendance," to better distinguish school-level leadership and recognize its direct impact on learning.

Strategy 1D: Re-examine state mandates and resulting cost burdens placed on local school divisions; eliminate unfunded mandates.

Objective 2: Improve the funding formula so that it further reduces the disparity between wealthy and poor districts.

Strategy 2A: Conduct a Joint Legislative Audit and Review Commission (JLARC) Study to evaluate state funding disparities and distribution.

Objective 3: Protect Virginia Retirement System (VRS) to make it a healthy defined benefit program and restore it to its fully funded status.

Strategy 3A: Avoid use of VRS funds to offset proposed expenditures in other areas.

Strategy 3B: Provide VRS funding to more accurately reflect the VRS Board's recommended actuarial rate.

Strategy 3C: Consider proposals that adequately fund VRS.

Objective 4: Require that the state provide multiple funding sources for school construction.

Strategy 4A: Reinstate the Literary Loan Program with increases from $7.5 million to $12 million for each approved project.

Strategy 4B: Provide direct state aid funding for school maintenance and construction projects.

Strategy 4C: Establish debt service opportunities for local education agencies to be provided by the state.

Strategy 4D: Explore and establish new state supported and initiated sources for school construction.

Objective 5: Require local revenue sharing agreements to carry over money in excess of required local effort.

Objective 6: Conduct a Joint Legislative Audit and Review Commission (JLARC) Study to investigate the impact, performance, and effectiveness of fiscally independent school boards.

Objective 7: Require incentive programs to become part of SOQ (e.g. At-Risk programs, PK programs, etc.)

Rationale

The good news is that Virginia's economy is improving. State tax revenues are beginning to grow again after an unprecedented two fiscal years of general fund (GF) revenue declines. The state now expects about six percent revenue growth in fiscal year 2011 GF (tax policy adjusted) and FY 2012. The bad news is that federal stimulus funding for K-12 is ending and local revenues continue to stagnate along with the real estate market. According to a recent House Appropriations Committee (HAC) survey report of FY 2010 and FY 2011 school division budgets, 59% percent of local school divisions received the **same or less local funding in FY 2011 as in FY 2010**.[5] Expect pressure on local revenues to continue over the next several years as the housing market continues to struggle. *In other words, the state is in the best position to increase its responsibilities for K-12 funding.*

Localities already shoulder a much larger portion of PK-12 expenditures than intended by state policy. While the Commonwealth may provide funding for its share of the Standards of Quality, this does not reflect the full cost of education in Virginia. The Commonwealth's funding formula should reflect the actual cost of providing quality education. The Virginia Department of Education reported that localities had to budget $3.1 billion in FY 2011 above their state required local effort (or 22 percent of all PK-12 spending) to maintain real world school systems.[6] DOE calculated that the median school division budgeted 66% more than required by the state in FY 2011, and in total, school divisions as a whole spent nearly twice the amount required by the state. According to the DOE's 2007 report on the *Status of Required Local Effort in Support of*

[5] http://hac.virginia.gov/committee/files/2010/11-16-10/Public_Education_Update.pdf

[6] http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/RD212011/$file/RD21.pdf

the Standards of Quality, only 40 percent of school funding in Virginia comes from the state, which is significantly below the national average of 47 percent.

It is now the state's turn to budget meaningful increases for PK-12. While revenues increased significantly over the original 2010-12 budget, the state did little in the 2011 Session to restore GF PK-12 funding that was **reduced $900 million from FY 2009 to FY 2011**.[7] The Governor and General Assembly increased biennial PK-12 spending by only $22 million out of $615 million in additional GF available. Instead, the state spent its additional GF resources on Medicaid, mental health programs, partial restoration of police department and sheriff's office funding, higher education, restoring VRS contributions, VITA computer contract increases, water quality programs, transportation, and rainy day fund reserves. The HAC report also summarized long-term PK-12 policy changes accompanying the state spending reductions:

- Established a funding cap ratio of 1 support position per 4 instructional-based SOQ positions
- Increased the federal revenue "deduct" from 29% to 38%
- Changed the funding methodology for health care premiums to actual participation rates
- Eliminated non-personnel inflation rate adjustments
- Eliminated or adjusted benefits, machinery & equipment, and other support costs from SOQ calculations

As a result, in FY 2012 local school divisions are continuing to close schools, increase class sizes, consolidate programs, reduce employee benefits, and shed personnel. The HAC survey report revealed the numerous budget reduction actions school divisions took in FY 2010 and FY 2011 to balance their budgets, including reductions in compensation and benefits, specific instructional-based and elective programs, textbooks, maintenance and equipment programs, transportation, and other non-personnel budget savings actions. In addition, 78 school divisions reported increasing class sizes as a cost-savings approach.

There is only one viable alternative to a continuing round of PK-12 budget reductions – additional state support. As additional state revenues become available, the state needs to significantly increase its priority for restoring its PK-12 funding programs. State aid for public education has declined from 35 percent of the GF budget in FY 2009 to under 30 percent in FY 2012 (see chart). Reversing this trend should start with the re-benchmarking process for the 2012-14 biennium. **First, the Governor should propose a re-benchmarking policy that captures federal stimulus funds** in the FY 2010 spending base. The $584 million in ARRA federal funds were clearly used in FY 2010 as a temporary substitute for state general funds. ARRA federal funds should be treated as state general funds for re-benchmarking purposes.

[7] GF Direct Aid to Public Education - FY 2009: $5.6 B; FY 2011: $4.7 B

Second, the state should re-think some of its recently enacted long-term policies used to justify spending reductions over the last several years. For example, there is no documented basis for the policy of limiting support staff to 1 support position per 4 teachers. A more thoroughly reasoned standard for support positions should be adopted. If not, then the state should return to using the prevailing cost methodology for support positions. The state should reverse its policy of eliminating non-personnel inflation adjustments. Why shouldn't the state assist school divisions in paying for higher energy and transportation costs? Basing the state payment for fuel and utilities based on 2009 costs is unrealistic given the increases in the prices of these commodities. Machinery and equipment replacement is also a necessary cost of education and the state should share in these costs.

Third, all the Standards of Quality revisions as proposed by the State Board of Education should be funded by the state:

- A full-time principal for each elementary school
- A full-time assistant principal for every 400 students in the school
- One reading specialist for every 1,000 students in PK-12
- One mathematics specialist for every 1,000 students in PK-8
- A data manager-test coordinator for every 1,000 students in PK-12
- Instructional positions for students who are blind or vision impaired
- Reducing speech-language pathologist caseloads from 68 to 60

Fourth, re-examine state mandates and the resulting cost burdens placed on local school divisions. Consider providing flexibility to school divisions for those state mandates that exceed federal requirements without adequate state funding, such as special education.

Finally, the state should increase funding for at-risk student education programs and consider including these programs in the Standards of Quality (SOQ) – particularly since there is a new state high school graduation mandate, beginning with accreditation ratings for FY 2012, that high schools must earn a minimum of 85 points on the graduation and completion index for full accreditation. Achieving this mandate will require funding, especially for those schools with higher numbers of at-risk students and lower graduation rates. For example, a recent VA Department of Education presentation noted if the new accreditation standards were applied to the Virginia on-time graduation rate for 2008-2009, it may have resulted in the following accreditation ratings[8]:

- Thirty six divisions would have had all of their high schools *Fully Accredited*
- Forty five divisions would have had high schools *Provisionally Accredited*

[8] www.doe.virginia.gov/support/.../superintendent_presentation_1.ppt

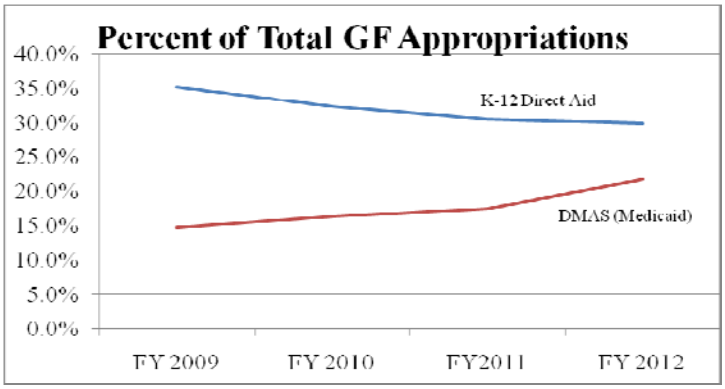
- Fifty divisions would have had high schools *Accredited with Warning*

To achieve these new graduation standards, low-graduation school districts will need improved early-warning and intervention systems, pro-active PK programs, redesigned feeder elementary and middle schools, and mentors working with every 15-20 off-track students. This will require excellent teachers, principals, and caring adults in schools, including counselors and graduation coaches to create a college-going culture. Of course, this requires adequate sources of funding in already fiscally-stressed localities.

In conclusion, the state is the only level of government that will have significant additional revenues available near term for restoring PK-12 public education funding. The federal government is reducing its budget due to huge deficits, and local government is hamstrung from the continuing real estate recession. Besides mandating improved high school graduation rates, the state has added on other requirements as well, such as the requirement to have a financial literacy course. The combined effect of changes over the last several years in the Standards of Accreditation and Standards of Learning are cumulative and real. Unfortunately, the state has not recognized its share of these additional costs through changes in the Standards of Quality, but instead has decreased funding even in the wake of additional requirements.

Of course, education is a critical component for Virginia's economic development. As the Council on Virginia's Future has noted, "the relationship between education and economic prosperity has strengthened over the last few decades as technology and innovation play increasingly important roles in competitiveness and growth."[9] The Council then documented the huge differences in median income between high school dropouts and college graduates. CNBC again just ranked Virginia for 2011 as "America's Top State for Business". One of the categories it cited for Virginia's business success was its PK-12 and higher education system. For Virginia to continue to be a world-class business destination, it will need to continue to have a world class education system.

Can Virginian's afford a world class education system? The answer is "Yes." According to the 2010 study by the Bureau of Economic Analysis and NEA Research, Virginia ranks 40th among the 50 states and Washington, D.C. in current expenditures for public PK-12 schools per $1,000 of personal income for 2008 (statistic provided by VEA).



Appendix A: Supporting

[9] http://future.virginia.gov/docs/IssueInsights/Insight5-EdAttainmentVA.pdf

Research

Curriculum/Readiness Research

Darling-Hammond, L., & Wentworth, L. (2010). *Benchmarking learning systems: Student performance assessment in international context.* Stanford, CA: Stanford University, Stanford Center for Opportunity Policy in Education. Retrieved from: http://edpolicy.stanford.edu/sites/default/files/publications/benchmarking-learning-systems.pdf

High-performing nations integrate curriculum, instruction, and assessment to improve both teaching and learning. As a large and increasing part of their examination systems, they use open-ended performance tasks and school-based assessments to give students opportunities to develop 21st century skills: The abilities to find and organize information to solve problems, frame and conduct investigations, analyze and synthesize data, and apply learning to new situations. This paper illustrates how several nations integrate these assessments into the curriculum to create stronger learning for both students and teachers, resulting in higher and more equitable achievement.

Benchmarking College and Career Readiness Standards to 21st Century Learning/International Standards

We did not find research related to benchmarking college and career readiness standards to 21st century learning and international standards. Thought is being given to how 21st century skills should be incorporated into college and career readiness standards, though there is no research to indicate how successful these ideas will be in practice. (Partnership for 21st Century, 2010; Silva, 2008).

Resources – Benchmarking College and Career Readiness

The following abstracts and summaries were taken verbatim from the online academic, government, or public databases from which we obtained them.

Partnership for 21st Century Skills (2010). *Up to the challenge: The role of career and technical education and 21st century skills in college and career readiness*. Partnership for 21st Century Skills, Retrieved from http://www.p21.org/documents/CTE_Oct2010.pdf.

This report highlights the demand for skills in the global economy and the ways in which educators can meet this demand by drawing on both career and technical education and the Partnership for 21st Century Skills' Framework for 21st Century Learning. Twenty-first century skills and career and technical education are essential in every state, district and school committed to college and career readiness for all students.

Silva, E. (2008). Measuring skills for the 21st century. Education Sector Reports. *Education Sector*, Retrieved from http://www.educationsector.org/sites/default/files/publications/MeasuringSkills.pdf.

Leaders in government, business, and higher education are calling for today's students to show a mastery of broader and more sophisticated skills like evaluating and analyzing information and thinking creatively about how to solve real-world problems. Standing in the way of incorporating such skills into teaching and learning are widespread concerns about measurement. In this report, Senior Policy Analyst Elena Silva examines new models of assessment that illustrate that the skills that really matter for the 21st century can be measured accurately and in a common and comparable way. New assessments such as the College Work and Readiness Assessment (CWRA), used at St. Andrew's School in Middletown, Delaware, illustrate that the ability to think creatively and to evaluate and analyze information can be measured accurately and in a common and comparable way. The CWRA and other emergent models demonstrate the potential to measure complex thinking skills at the same time as a student's mastery of core content or basic skills and knowledge. There is, advocates the author, no need for more tests to measure advanced skills. Rather, there is a need for better tests that measure more of the skills students' need to succeed today. (Abstract by ERIC)

Resources – PK-12 Career Development

Hughes, K.L., & Karp, M.M. (2004). School-based career development: A synthesis of the literature. Institute on Education and the Economy, Columbia University, Retrieved from http://www.tc.columbia.edu/iee/PAPERS/CareerDevelopment02_04.pdf.

This synthesis of the research literature, covering meta-analyses and individual studies on comprehensive guidance programs, career courses, counseling interventions and computer-assisted career guidance, finds many benefits to students of career guidance and academic counseling interventions. On a variety of career-related and academic measures, student subjects did have increased outcomes. However, there are also limitations to the interventions and to the research methods studying them. Many of the interventions are short-term, low-dosage activities, with lasting benefits unclear. In addition, much of the research relies on self-reported responses to psychological inventories. Based on the findings of the research review, recommendations are to focus practice and research on middle-school students, and target resources towards ensuring that all middle- and high-school students have regular conferences with counselors to discuss their current and future academic programs. Finally, research should focus on exploring the relationships between guidance interventions and positive student behaviors, rather than attitudes. (Contains a Comprehensive Guidance and Counseling Bibliography.)

This response was prepared under a contract with the U.S. Department of Education's Institute of Education Sciences (IES), Contract ED-06-CO-0021, by Regional Educational Laboratory Appalachia, administered by CNA. The content of the response does not necessarily reflect the views

or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. government.

Assessment Research

Identifying and Sharing Balanced Assessments

Recent state and federal policy initiatives have placed significant national attention on student assessment scores as indicators of both student achievement and teacher effectiveness. Achieve, Inc. and other non-profit advocacy groups have encouraged the development of high quality assessments grounded in research. Self-published assessment resources from Achieve are available at http://www.achieve.org/assessments-0. Such assessments include multiple measures of achievement and interim assessments throughout the year (Darling-Hammond, et al., 2010; Perie, et al., 2007).

Developers of the "next generation" of assessments often look to standards from various states, new innovations, and international benchmarks (Darling-Hammond, et al., 2010). Achieve, the Data Quality Campaign, and other advocates stress the need for analyses enabled by state-level longitudinal data systems that cover a range of indicators, including information on individual student progression and readiness for college and careers. These data elements, they argue, should comprise assessments in order to give educators and policymakers an accurate view of educational quality and achievement (Smith, n.d.). Research in all these areas continues to develop, both in Virginia and across the country, as many other states adopt common assessments.

Resources – Balanced Assessments

The following abstracts and summaries were taken verbatim from the online academic, government, or public databases from which we obtained them unless otherwise noted.

Darling-Hammond, L., Pecheone, R., Jacquith, A., et al. (2010). Developing an internationally comparable balanced assessment system that supports high-quality learning. Paper presented to the National Conference of Next Generation Assessment Systems. Center for K-12 Assessment and Performance Management, Educational Testing Service. Retrieved July 19, 2011 from http://k-12center.com/rsc/pdf/Darling-HammondPechoneSystemModel.pdf.

Contemporary efforts to create a set of Common Core Standards in the United States have been grounded in a desire to create more internationally competitive expectations by benchmarking learning objectives to those in high□performing nations abroad. Over the last two decades, all 50 states have developed standards for learning and tests to evaluate student progress. No Child Left Behind reinforced using test□based accountability to raise achievement, yet the United States has fallen further behind on international assessments of student learning since the law was passed in 2001.

Smith, N. (n.d.). *Next generation state data system: What is needed to support the next generation assessment and accountability systems*. Achieve, Inc. Retrieved July 20, 2011 from http://www.achieve.org/files/RobustStateDataSystem.pdf.

In order for the next generation of assessment and accountability systems to include much broader information about students' academic and performance histories than they currently do, state data systems will need to expand to include more student information. Currently, state education agencies (SEAs) and local education agencies (LEAs) in most states maintain separate student-level data systems that are each designed to meet their own reporting requirements. In order to contemplate how to create or transition to a state-level next generation system, we need to evaluate how current systems are organized.

State-Supported Access to Assessments, Curriculum, and Statistical Analysis and Reporting Tools

Lang and colleagues examine the effect of data use and the potential influence of data reporting requirements on student learning outcomes. In addition to this article, the reader may be interested in accessing the data and visualization tools available through the National Center for Education Statistics online at http://nces.ed.gov/datalab/.

We were not able to identify existing research on the effects of sharing information across schools. Kentucky, however, recently initiated its Continuous Instructional Improvement Technology System (http://www.education.ky.gov/kde/instructional+resources/curriculum+documents+and+resources/continuous+instructional+improvement+technology+system+(ciits).htm). The development of this initiative could be of interest as future evaluation results become available.

Measuring Student Growth and the Growth of English Language Learners

An extensive literature has developed in recent years concerning growth models of student achievement. Here, we provide an introductory piece considering the role of scaling student scores to enable "consistent interpretation over time" (Briggs, Weeks, and Wiley, 2008).

Recent research on growth indicators for English language learners (ELLs) often leads to discussions on perceived needs by researchers for the development of assessments that can a) predict the indicators on which English language instructors should most focus in order to encourage student growth or b) evaluate ELLs in a way that recognizes their baseline language skills as a basis for evaluation of growth over an academic year (Kieffer, 2008 and Durán, 2008).

Briggs, D., Weeks, J., and Wiley, E. (2008). Vertical scaling in value-added models for student learning. Paper presented to the National Conference on Value-Added Modeling, University of Wisconsin at Madison. Retrieved July 19, 2011 from http://www.vanderbilt.edu/lpo/dateproject/lm3/resources/DerekBriggs_EdWiley_JonathanWeeks-PAPER-vertical_scaling_in_va_models.pdf.

The purpose of this paper is to evaluate the sensitivity of growth and value-added modeling results to the way an underlying vertical scale has been established. We accomplish this by analyzing longitudinal item-level data with both student and school-level identifiers over time in the state of Colorado. We use this data to address two principal research questions:

1. What is the sensitivity of a longitudinal score scale to the way the test scores have been vertically scaled?
2. What impact do different IRT-based vertical scaling approaches have on
    a. projections of growth in student achievement?
    b. estimates of value-added school effects?

The basic strategy taken here is to create different vertical scales on the basis of choices made for three key variables: IRT modeling approach, calibration approach and student proficiency estimation approach. Combinations of among these three variables leads to eight different vertical scales. Each scale represents a methodological approach that is in some sense defensible. Of interest at this stage are potential differences in means and standard deviations among the different vertical scales from year to year. We next use the longitudinal values of each scale as the outcome variable in two linear mixed effects models: a three level hierarchical linear model (Raudenbush & Bryk, 2002) and the layered model (Sanders, Saxton & Horn, 1997; McCaffrey et al., 2004). Of interest at this stage are comparisons among the different fixed effect estimates of growth, empirical Bayes estimates of student and school-level growth, and empirical Bayes estimates of school-level "effects" by grade/year combination. Our findings suggest that both growth projections and value-added estimates may in fact be quite sensitive to choices made in the development of a vertical scale.

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Instructional Delivery Research

Professional Learning Communities (PLCs)

Teachers who access frequent, intensive professional development may teach more effectively, yet most professional development is in frequent, superficial, and disconnected from subject area and individual problems of practice (Little, 2006). The professional learning community (PLC) model of professional development delivery is designed to enable educators to engage in high quality, high relevance learning experiences on a frequent basis (Vescio, et al, 2006). PLCs generally exhibit five attributes (Hord, 1997):

- supportive and shared leadership,
- collective learning,
- shared values and vision,
- supportive conditions, and
- shared personal practice.

PLCs have gained popularity as a means for improving instruction and professionalism (DuFour, 2004).

Resources – Professional Learning Communities

The following abstracts and summaries were taken verbatim from the online academic, government, or public databases from which we obtained them unless otherwise noted.

DuFour, R. (2004). What is a "Professional Learning Community?", Educational Leadership, 61(8), 6-11. Retrieved from http://pdonline.ascd.org/pd_online/secondary_reading/el200405_dufour.html.

The professional learning community model has now reached a critical juncture, one well known to those who have witnessed the fate of other well-intentioned school reform efforts. In this all-too-familiar cycle, initial enthusiasm gives way to confusion about the fundamental concepts driving the initiative, followed by inevitable implementation problems, the conclusion that the reform has failed to bring about the desired results, abandonment of the reform, and the launch of a new search for the next promising initiative. Another reform movement has come and gone, reinforcing the conventional education wisdom that promises, "This too shall pass."

The movement to develop professional learning communities can avoid this cycle, but only if educators reflect critically on the concept's merits. What are the "big ideas" that represent the core principles of professional learning communities? How do these principles guide schools' efforts to sustain the professional learning community model until it becomes deeply embedded in the culture of the school?

Hord, S.M. (1997). Professional learning communities: What are they and why are they important? Issues ... about Change, 6(1), 1-8. Retrieved from http://www.sedl.org/change/issues/issues61/Issues_Vol6_No1_1997.pdf.

This paper focuses on what Astuto and colleagues (1993) label the professional community of learners, in which the teachers in a school and its administrators continuously seek and share learning and then act on what they learn. The goal of their actions is to enhance their effectiveness as professionals so that students benefit. This arrangement has also been termed communities of continuous inquiry and improvement. As an organizational arrangement, the professional learning community is seen as a powerful staff development approach and a potent strategy for school change and improvement. Thus, persons at all levels of the educational system concerned about school improvement - state department personnel, intermediate service agency staff, district and campus administrators, teacher leaders, key parents and local school community members - should find this paper of interest. This paper represents an abbreviation of Hord's review of the literature (1997), which explored the concept and operationalization of professional learning communities and their outcomes for staff and students.

Vescio, V., Ross, D., & Adams, A. (2006). A review of research on professional learning communities: What do we know? Proceedings form National School Reform Faculty Research Forum. Retrieved from http://www.nsrfharmony.org/research.vescio_ross_adams.pdf.

Over the past twenty years there has been a paradigm shift gathering momentum with regard to the professional development of teachers. Fueled by the complexities of teaching and learning within a climate of increasing accountability, this reform moves professional development beyond merely supporting the acquisition of new knowledge and skills for teachers. In their article on policies that support professional development, Darling-Hammond and McLaughlin (1995) write, "The vision of practice that underlies the nation's reform agenda requires most teachers to rethink their own practice, to construct new classroom roles and expectations about student outcomes, and to teach in ways they have never taught before" (para 1). Darling Hammond and McLaughlin go on to note that helping teachers rethink practice necessitates professional development that involves teachers in the dual capacities of both teaching and learning and creates new visions of what, when, and how teachers should learn. This most recent model of professional development ultimately requires a fundamental change in the institutional structures that have governed schooling as it has traditionally existed.

Formative Assessment

Summative assessment is used to determine students' knowledge at a single point in time, typically at the end of an instructional unit or course. In contrast, formative assessment is part of the instructional process and helps tailor lessons to individual students' needs (Garrison &Ehringhaus, n.d.). Research indicates that effective formative assessment can generate substantial learning gains, especially when it actively develops students' self-assessment capabilities (Black & William, 1998).

Online and Blended Coursework

Online and blended/hybrid instruction courses can potentially reduce the cost of instruction while raising student achievement. A comprehensive meta-analysis of research literature conducted by the U.S. Department of Education found that online and blended/hybrid instruction are at least as effective as, and in some cases more effective than, traditional, face-to-face instruction (Bakia, et al., 2010).

Resources – Online and Blended Coursework

The following abstracts and summaries were taken verbatim from the online academic, government, or public databases from which we obtained them unless otherwise noted.

Bakia., M, Means, B., Murphy, R., Toyama, Y., & Jones, K. (2010). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. Washington, D.C.: U.S. Department of Education, Office of Planning, Evaluation, and Policy Development, Policy and Program Studies Service. Retrieved from http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf.

A systematic search of the research literature from 1996 through July 2008 identified more than a thousand empirical studies of online learning. Analysts screened these studies to find those that (a) contrasted an online to a face-to-face condition, (b) measured student learning outcomes, (c) used a rigorous research design, and (d) provided adequate information to calculate an effect size. As a result of this screening, 50 independent effects were identified that could be subjected to meta-analysis. The meta-analysis found that, on average, students in online learning conditions performed modestly better than those receiving face-to-face instruction. The difference between student outcomes for online and face-to-face classes—measured as the difference between treatment and control means, divided by the pooled standard deviation—was larger in those studies contrasting conditions that blended elements of online and face-to-face instruction with conditions taught entirely face-to-face. Analysts noted that these blended conditions often included additional learning time and instructional elements not received by students in control conditions. This finding suggests that the positive effects associated with blended learning should not be attributed to the media, per se. An unexpected finding was the small number of rigorous published studies contrasting online and face-to-face learning conditions for K–12 students. In light of this small corpus, caution is required in generalizing to the K–12 population because the results are derived for the most part from studies in other settings (e.g., medical training, higher education).

School Year Length

Nearly all states mandate a minimum of 175-180 instruction days (or equivalent hours) during the school year. A small number of schools and districts provide additional instructional days (Dixon, 2011; Marcotte & Hansen, 2010). Research using variations in school year created by adverse weather suggests that additional instructional days have a statistically significant, though small, positive effect on test scores.

A secondary body of research suggests that instructional time is more important than instructional days because additional school days do not necessarily result in additional learning time.

REL Appalachia prepared a Reference Desk response on this topic that can be accessed at this URL: http://www.cna.org/centers/education/rel/tech-assistance/reference-desk/2011-03-04. The resources cited in the Reference Desk response are listed below.

Resources – School Year Length

The following abstracts and summaries were taken verbatim from the online academic, government, or public databases from which we obtained them unless otherwise noted.

Dixon, A. (2011). Focus on the alternative school calendar: Year-round school programs and update on the four-day school week. Atlanta, GA: Southern Regional Education Board. Retrieved from http://publications.sreb.org/2011/11S01_Alt_Cal.pdf.

With renewed focus at the state and federal level on reforming education and increasing student learning, state policy-makers also are looking for more creative ways to arrange the instructional school year. The concept of altering the traditional school calendar is not new, but few schools and districts across the country have embraced the idea. Those that have chosen alternative calendars typically have similar reasons, including raising student achievement, reducing the achievement gap among groups of students, saving money, and decreasing school overcrowding.

Fitzpatrick, M., Grissmer, D., and Hastedt, S. (2010). What a difference a day makes: Estimating daily learning gains during kindergarten and first grade using a natural experiment. Economics of Education Review. Article in press. Retrieved from: http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VB9-514Y2FN-1&_user=10&.

Knowing whether time spent in formal schooling increases student achievement, and by how much, is important for policymakers interested in determining efficient use of resources. Using the ECLS-K, we exploit quasi-randomness in the timing of assessment dates to examine this question. Conservative estimates suggest a year of school results in gains of about one standard deviation above normal developmental gains in both reading and math test scores. The results are statistically significant and extremely robust to specification choice, supporting quasi-randomness of test dates. Estimates of skill accumulation due to formal schooling do not vary based on socioeconomic characteristics.

Marcotte, D. and Hemelt, S. (2007). Unscheduled school closings and student performance, IZA Discussion Paper No. 2923. Retrieved from: http://ftp.iza.org/dp2923.pdf.

Do students perform better on statewide assessments in years in which they have more school days to prepare? We explore this question using data on math and reading assessments taken by students in the 3rd, 5th and 8th grades since 1994 in Maryland. Our identification strategy is rooted in the fact that tests are administered on the same day(s) statewide in late winter or early spring, and any unscheduled closings due to snow reduce instruction time, and are not made up until after the exams are over. We estimate that in academic years with an average number of unscheduled closures (5), the number of 3rd graders performing satisfactorily on state reading and math assessments within a school is nearly 3 percent lower than in years with no school closings. The impacts of closure are smaller for students in 5th and 8th grade. Combining our estimates with actual patterns of unscheduled closings in the last 3 years, we find that more than half of schools failing to make adequate yearly progress (AYP) in 3rd grade math or reading, required under No Child Left Behind, would have met AYP if schools had been open on all scheduled days.

Smith, B. (2002). Quantity matters: Annual instructional time in an urban school system. Education Administration Quarterly, 36(5), 652-682. Retrieved from: http://www.eric.ed.gov/ERICWebPortal/search/recordDetails.jsp?.

This article shares a series of instructional time analyses to illustrate how school management, social and cultural welfare programs, high-stakes testing, system policies, and a flawed notion of organizational efficiency combine to cripple enormous blocks of annual instructional time in a large urban district. Data analyzed were classroom observation records, field notes, teacher interviews, school calendars, and system documents. School trends that fragment and erode instructional time and reformers' reluctance to rethink instructional time are discussed. In closing, administrators are urged to view the allocation and management of time as one of their most important and powerful functions, and actions to recover instructional time for teachers and students are outlined.

School Day Scheduling

Schools may structure the 180-day school year in a number of ways. Most districts conduct the school year from fall to spring, with an 8-10 week summer break, while a small number of districts and individual schools within districts break the school year up into quarters punctuated by 1-2 week "intercessions" (Dixon, 2011).

Many states and districts face revenue shortfalls as a result of the housing market crash and subsequent economic downturn and are considering implement 4-day school weeks as a cost-saving measure. Four-day weeks may contribute to decreased teacher and student absenteeism, improved student and teacher morale, reduced disciplinary infractions, and gains in student achievement (Dixon, 2011). Analyses indicate that realized cost savings as a result of reducing the school week range from 0.4% to 5.43% (Griffith, 2011)

REL Appalachia prepared a Reference Desk response on block scheduling that can be accessed at this URL: http://www.cna.org/centers/education/rel/tech-assistance/reference-desk/2011-03-14. Some resources cited in the Reference Desk response are listed below. The author of the response found that:

An existing literature review and our own search identified several advantages and drawbacks associated with block schedules. Frequently, studies have found mixed results and even conflicting outcomes. Unintended consequences of block schedules identified in research include lower academic performance and more challenges managing student behavior relative to traditional schedules, though improved academics and behavior have also been observed. The literature review by Zepeda and Mayers (2006) suggests that the mixed results could be due to inconsistent implementation of block scheduling practices and limitations of research designs.

Resources – School Day Scheduling

The following abstracts and summaries were taken verbatim from the online academic, government, or public databases from which we obtained them.

Griffith, M. (2011). What savings are produced by moving to a four-day school week? Denver, CO: Education Commission of the States. Retrieved from http://www.ecs.org/clearinghouse/93/69/9369.pdf.

Due to the current economic downturn, policymakers have been looking for budgetary options that allow for reductions in expenditures without impacting student achievement. One cost-cutting policy that some states and districts have adopted is to keep instructional time the same but shorten the school week. A recent policy brief from ECS found that approximately 120 districts in 17 states have made the move to a four-day school week. But the question still exists — what cost savings, if any, are produced? This report shows what savings a district might realistically expect to realize when moving to a four-day week.

Dixon, A. (2011). Focus on the alternative school calendar: Year-round school programs and update on the four-day school week. Atlanta, GA: Southern Regional Education Board. Retrieved from http://publications.sreb.org/2011/11S01_Alt_Cal.pdf.

With renewed focus at the state and federal level on reforming education and increasing student learning, state policy-makers also are looking for more creative ways to arrange the instructional school year. The concept of altering the traditional school calendar is not new, but few schools and districts across the country have embraced the idea. Those that have chosen alternative calendars typically have similar reasons, including raising student achievement, reducing the achievement gap among groups of students, saving money, and decreasing school overcrowding.

Khazzaka, J. (1998). Comparing the merits of a seven period school day to those of a four period school day, High School Journal, 81(2), 87-97. Retrieved from http://www.jstor.org/stable/40364699.

The 50 minute class period seems to offer insufficient time for students to learn school subjects in depth, resulting in truancy, discipline problems, and low academic performance. In response, block scheduling is promoted as an alternative to improve student attendance, discipline, and performance. This study analyzes records of six secondary schools that switched from traditional to block scheduling, to compare the merits of each. The study also surveys students, teachers, parents, and administrators to determine their attitudes toward both types of scheduling. Results seem to favor block scheduling.

National Education Commission on Time and Learning (1994). Prisoners of time: Report of the National Education Commission on time and learning. Washington D.C.: U.S. Government Printing Office. Retrieved from www.eric.ed.gov, ED489343.

This revised edition of "Prisoners of Time" is designed to refocus attention on the critical issue of using time as a resource for teaching and learning. It contains the same text as the original report but also includes some up-to-date examples of the creative and productive ways in which schools can use time. State and local education leaders are called upon to take on this agenda as an important opportunity to improve student learning across a broad range of skills-and thus the economic and civic strength of the country. Appended are: (1) Members of the National Education Commission on Time and Learning; (2) Letter of Transmittal; (3) Acknowledgments; and (4) Glossary.

Response to Intervention

A primer on Response to Intervention (RTI) prepared by the National Association of School Psychologists is available for download at this URL: http://www.nasponline.org/resources/handouts/revisedPDFs/rtiprimer.pdf. Further, the What Works Clearinghouse at USED has two practice guides devoted to implementing RTI in math and English. These guides summarize the most rigorous research related to pressing problems in education today. See http://ies.ed.gov/ncee/wwc/publications/practiceguides/.

Resources – Response to Intervention

The following abstracts and summaries were taken verbatim from the online academic, government, or public databases from which we obtained them.

Klotz, M. B. (2006). Response to Intervention (RTI): A primer for parents. Bethesda, MD: National Association of School Psychologists. Retrieved from http://www.nasponline.org/resources/handouts/revisedPDFs/rtiprimer.pdf.

A major concern for parents as well as teachers is how to help children who experience difficulty in school. All parents want to see their child excel, and it can be very frustrating when a child falls behind in either learning to read, achieving as expected in math and other subjects, or getting along socially with peers and teachers. Response to Intervention (RTI) is a multi-step approach to providing services and interventions to struggling learners at increasing levels of intensity. RTI allows for early intervention by providing academic and behavioral supports rather than waiting for a child to fail before offering help.

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Human Capital Research

Recruitment and Retention

Both recruitment of new teachers and retention of current teachers (either within a specific school or within the profession in general) are challenges to developing an effective teacher workforce. There are many motivating factors for teachers who choose to change schools or professions, including salary (Ingersoll and Perda, 2009). For teachers who remain in the profession, again salary is one of many motivators, but often not the main motivator (Darling-Hammond, 2006). Further, some researchers argue that the overall incentive structure for educators is "fragmented and uncoordinated," resulting in piecemeal policies that may not systematically form a coherent plan for salaries and benefits (Podgursky and Springer, 2011).

Resources – Recruitment and Retention

The following abstracts and summaries were taken verbatim from the online academic, government, or public databases from which we obtained them unless otherwise noted.

Ingersoll, R.M., and Perda, D. (2009). *The mathematics and science teacher shortage: Fact and myth*. CPRE Research Report #RR-62 The Consortium for Policy Research in Education. Retrieved July 19, 2011 from https://www.csun.edu/science/courses/710/bibliography/math%20science%20shortage%20paper%20march%202009%20final.pdf.

The objective of this study is to empirically reexamine the issue of mathematics and science teacher shortages and to evaluate the extent to which there is a supply-side deficit—a shortage—of new teachers in these particular fields. The data utilized in this investigation are from three sources—the Schools and Staffing Survey and its supplement, the Teacher Follow-Up Survey; the Integrated Postsecondary Educational Data System; and the Baccalaureate and Beyond Survey, all conducted by the National Center for Education Statistics.

The data show that there are indeed widespread school staffing problems—that is, many schools experience difficulties filling their classrooms with qualified candidates, especially in the fields of math and science. But, contrary to conventional wisdom, the data also show that these school staffing problems are not solely, or even primarily, due to shortages in the sense that too few new mathematics and science teachers are produced each year.

Podgursky, M., and Springer, M. (2011). Teacher compensation systems in the United States K-12 public school system, *National Tax Journal, 64* (1), 165–192. Retrieved July 19, 2011 from http://ntj.tax.org/wwtax/ntjrec.nsf/009a9a91c225e83d852567ed006212d8/a03692bdaadff66f8525784 e007713ce/$FILE/A07-Springer.pdf.

This paper provides a review of the current teacher compensation system and examines the structure of teacher compensation in the U.S. K-12 public education system. Teacher salaries are largely set by schedules that are neither performance-related nor market-driven, and have significant consequences on school staffing and workforce quality. The second section summarizes the recent literature on compensation reform, with an emphasis on studies using experimental or quasi-experimental designs to evaluate the impact of programs on student achievement and teacher outcomes. A final section offers observations on prospects for future research and reforms.

Educator Evaluation: Student Achievement and Pay for Performance

There are many resources that discuss the merits of including student achievement in teacher evaluation systems, as well as the benefits and risks associated with teacher merit pay. In general, research is inconclusive about whether or how student performance should be used in teacher evaluations. Most research suggests that student performance can be effectively included as a part of teacher evaluation, but not as a sole source of data (Goldhaber and Hansen, 2010). Further, research suggests using such student achievement scores to inform professional development and placement of teachers rather than as a high-stakes evaluation, though some researchers do suggest deselection of teachers based on students' scores as an option (Hanushek, 2009). There are many programs in place around the country that offer merit pay or pay-for-performance to teachers, though research on the subject is rather immature (Hulleman and Barron, 2010; Podgursky and Springer, 2011). Again, research on this practice is inconclusive, showing positive outcomes in some cases and not in others (Koppich and Rigby, 2009).

Resources – Educator evaluation: Student Achievement and Pay for Performance

Education Commission of the States. (2010).Teacher merit pay: What do we know?, *The Progress of Education Reform*, *11*, 1-4. Retrieved July 19, 2011 from http://ecs.org/clearinghouse/86/40/8640.pdf.

Merit pay programs for educators — sometimes referred to a "pay for performance" — attempt to tie a teacher's compensation to his/her performance in the classroom. While the idea of merit pay for classroom teachers has been around for several decades, only now is it starting to be implemented in a growing number of districts around the country. One example of the increased interest for merit pay systems can be seen in the recent increased funding level for the federal Teacher Incentive Fund (TIF). The TIF program, which is run through the United States Department of Education (USDOE), provides funding to school districts to help them implement merit pay systems. The USDOE has increased funding for the TIF program this year by more than four-fold — from $97.3 million to $437 million. But with all of this increased interest and funding for merit pay programs — what if anything do we know about the costs versus the benefits of these systems?

Hanushek, E.A. (2009). Teacher deselection, in *Creating a New Teaching Profession*, ed. D. Goldhaber and J. Hannaway, 165–80. Washington, DC: Urban Institute Press. Retrieved July 19, 2011 from http://leadingmatters.stanford.edu/san_francisco/documents/Teacher_Deselection-Hanushek.pdf.

This discussion provides a quantitative statement of one approach to achieving the governors' (and the nation's) goals – teacher deselection. Specifically, how much progress in student achievement could be accomplished by instituting a program of removing, or deselecting, the least effective teachers? A variety of policies for hiring and retraining teachers have been proposed, but they are not been very successful in the aggregate as student performance has not improved. At the same time, it is widely recognized that some teachers do a very poor job, and few people believe that the worst teachers can be transformed into good teachers. What would happen if we simply adopted policies of systematically removing the worst teachers?

Professional Development

Barriers exist to educators using technology, both as a learning platform or teaching platform (Butler and Sellbom, 2002). However, using technology, especially online tools, shows promise as an approach to professional development (Kaliban, 2004; Polly and Hannafin, 2010). Further, professional development can help educators overcome barriers associated with technology use, which in turn can facilitate students' use of technology in the classroom (Brinkerhoff, 2006; Polly and Hannafin, 2010).

Resources – Professional Development

The following abstracts and summaries were taken verbatim from the online academic, government, or public databases from which we obtained them unless otherwise noted.

Kabilan, M.K. (2004-2005). Online professional development: A literature analysis of teacher competency, *Journal of Computing in Teacher Education*, *21*(2), 51-57. Retrieved July 19, 2011 from ERIC.

Findings from research indicate that teachers participating in online professional development (OPD) activities and programmes have gained, in some way or another, a great deal of teacher competency. In spite of this, no research has been undertaken to systematically identify and acknowledge the types of teacher competencies that are frequently associated with and attributed to OPD. This paper, based on findings from other studies and literature reviews, attempts to initiate and explore the above vacuum. A literature analysis, using a simple tool based on the coding strategies, is used to categorize the types or aspects of teacher competencies that were evident. The results indicate five major aspects: (1) motivation; (2) skills, knowledge and ideas; (3) self-directed learning; (4) interactive competence; and (5) computer technology awareness and skills.

Polly, D. and Hannafin, M.J. (2010). Reexamining technology's role in learner-centered professional development, *Educational Technology Research and Development*, *58*, 557-571.

The American Psychological Association's "Learner-centered Principles" provides empirically-based approaches to improving teaching and learning. However, in order to facilitate learner-centered, technology-rich instruction to K-12 students, teachers must be afforded opportunities to develop key understandings and skills, rarely evident in most professional development programs. In this paper, we synthesize empirically-based studies and recommendations for teacher learning and propose a learner-centered professional development (LCPD) framework to guide both professional development and empirical work on teacher learning. We describe LCPD components, discuss ways that technology can support LCPD, and highlight implications for research and practice.

This response was prepared under a contract with the U.S. Department of Education's Institute of Education Sciences (IES), Contract ED-06-CO-0021, by Regional Educational Laboratory Appalachia, administered by CNA. The content of the response does not necessarily reflect the views or policies of IES or the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. government.

State's Role in Funding Public Education Research

Funding Public Education

School finance equity is a complex problem in the funding of public education. There are several models for state funding formulas: Foundation/Base, Modified Foundation/Base formula, Teacher Allocation, Dollar Funding per Student (Checkley, 2008). Virginia has a modified foundation/base formula for funding public education. This funding method provides for a base-funding amount that is multiplied by a weight for each student depending on the perceived level of the student's educational needs (e.g., special education, English Language Learner or at-risk programs), and the foundation dollar amount varies from district to district (Griffith, 2005).

Equity in school funding has two dimensions. Horizontal equity is when school districts considered to be similar to each other have comparable levels of funding. Similarity is based on wealth, size, socioeconomic status, and other dimensions related to the cost of providing education. Horizontal equity relies on *equal treatment of schools* (Toutkoushian & Michael, 2007b). Vertical equity is when school districts with higher costs of educating student populations receive more funding than their counterparts to compensate for this difference. Vertical equity relies on *unequal treatment of unequals*.

Modifications to State Funding Formulas

Changes in state funding formulas, referred to as overlay provisions, are often made to improve equity across schools vertically and/or horizontally. These provisions are formulas that take into account factors such as total revenues based on the foundation grant, current enrollment, and year to year changes in revenue. It has been only recently that the effect of overlay provisions on equity and adequacy has been studied in a systematic way. Toutkoushian & Michael (2007a, 2008) looked extensively at overlay provisions enacted by Indiana in 2005 with a funding formula that is foundation/base. The provisions were designed to help protect districts from large revenue changes (mostly declines). They found that the overlay provisions in Indiana "contributed significantly to horizontal and vertical inequity in funding." Michael, Spradlin & Carson (2009) also examined recently enacted funding formulas in Indiana which placed upper and lower limits on the amount the foundation generates. They observed that horizontal equity decreased when limits were imposed, while there was minimal effect on vertical equity.

Looking at state aid formulas in Massachusetts (a foundation/base formula) from 2004 to 2009, Fahy (2011) found that "required spending varies by student characteristics only when community factors are held constant" (e.g. community wealth, regional districts, etc.) and the likelihood of a district benefiting from aid modifications increases for wealthier communities, regional school districts, and districts with high proportions of low income elementary school students and lower enrollment districts.

Wang Ko (2006) examined the effects of state policy on equity in Missouri from 1991 to 1999. He found that overall school finance equity increased as total revenue, state and local revenue,

and current expenditures increased. Wang Ko also found that equity took a downturn in 1997-98. It was suggested this downturn could be a result of either additional grant monies from other sources (e.g., incentive grants, A+ grants and teacher grants) or shifts in state policy from equity to adequacy.

Increasing state aid might have unintended consequences, as Driscoll and Solomon (2008) found in Virginia. In response to increases in state funding in 2003 to 2005, some local governing agencies used the increase in state aid for local tax relief. These districts were most likely to be administered by county governments and possess low fiscal capacity, low fiscal effort, high percent free and reduced lunch counts and low adjusted state and local per-pupil expenditures.

Resources – Modifications to State Funding Formulas

The following abstracts and summaries were taken verbatim from the online academic, government, or public databases from which we obtained them.

Driscoll, L.G., & Salmon, R.G. (2008). How increased state equalization aid resulted in greater disparities: An unexpected consequence for the Commonwealth of Virginia. *Journal of Education Finance*, *33*(3), 238-261. http://0-www.eric.ed.gov.novacat.nova.edu/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_&ERICExtSearch_SearchValue_0=EJ781681&ERICExtSearch_SearchType_0=no&accno=EJ781681

Two years ago a fiscal equity analysis assessed the current Virginia equalization formula over its history (fiscal year 1975-fiscal year 2003). The findings indicated by accepted equity statistics were that the level of equity improved from fiscal year 1975 through fiscal year 1994 and leveled off from fiscal year 1994 through fiscal year 2003. Between fiscal years 2003 and 2005, a bipartisan effort increased the state funding for public elementary and secondary education by $755 million, or nearly 18% over the previous biennium. Usually when the state assumes a greater fiscal responsibility for funding its public schools, a higher level of fiscal equity is the result. Why then did the equity statistics in Virginia fall precipitously between fiscal years 2003 and 2005? It appeared that some local school districts--actually the local governing agencies--have used the increased state aid for local tax relief. Districts that decreased or level-funded their budgets were more likely to be administered by county governments and possess low fiscal capacity, low fiscal effort, high-percent free and reduced lunch counts, and low adjusted state and local per-pupil expenditures.

Fahy, C. (2011). Education funding in Massachusetts: The effects of aid modifications on vertical and horizontal equity. *Journal of Education Finance*, *36*(3), 217-243. http://0-www.eric.ed.gov.novacat.nova.edu/ERICWebPortal/search/recordDetails.jsp?ERICExtSearch_Descriptor=%22Program+Costs%22&_pageLabel=RecordDetails&accno=EJ917864&_nfls=false

Public school funding in Massachusetts is based on foundation budget principles. However, funding formula modifications often create disparities between district foundation budgets and actual required spending levels. This study provides an in-depth look at Massachusetts' state aid formulas used between 2004 and 2009 and utilizes two approaches to measure the effects of aid modifications on vertical and horizontal equity. The first is a regression-based approach which compares the intended effects of student characteristics on foundation spending to the actual effects on required spending. The second approach measures equity directly for each school district and uses the Tobit estimation technique to examine the effects of student and district characteristics on the equity measure. Results indicate that district characteristics such as community wealth and regional school systems increase the likelihood of a district benefiting from aid modifications. Holding community characteristics constant, there is also evidence that districts with high proportions of low income elementary school students and/or English language learners benefit from overlay provisions as well.

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Fiscally Independent School Boards

According to the National Association of State Boards of Education, Virginia is one of nine states in the country with fiscally dependent school boards. Thirty-four states have autonomous boards and twenty-six states allow districts to have taking authority if they choose [statistic provided by VEA].