



CASE STUDY

# Big Gains for Newport News (VA) Using a Systems- Thinking Approach to RTI

*by Nathan Levenson and Megan Roth*

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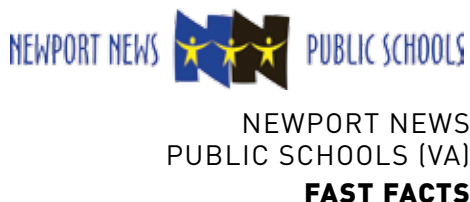
In 2011-12, the state of Virginia began phasing in more rigorous state tests and standards that yielded troubling results for Newport News Public Schools (NNPS). The new math Standards of Learning (SOL) state test, rolled out in 2011-12, showed that only 55% of NNPS elementary students were proficient in math as compared with 86% under the old test; the new reading test introduced the following year showed only 60% of elementary students in the district were proficient, down from 79%. In both math and reading, the impact of the new standards had been much greater for the students in NNPS than for students in other districts across the state.

Superintendent Ashby Kilgore and her leadership team were highly concerned. Newport News Public Schools (VA), a close neighbor to both Virginia Beach and Norfolk, was well known across the state of Virginia as an excellent urban school district.<sup>1</sup> With multiple military bases nearby, the student population of 30,000 is quite transient; despite this, NNPS had always posted consistently strong test scores across all subjects and was well regarded for its successful programs ensuring students are career and college ready.

1. In the state of Virginia, districts are called "Divisions." For the purposes of this article, we will be referring to Newport News Public Schools as a district.

District leadership was determined to raise the results of the district's students. The leadership team decided to add staff to ensure that all students struggling academically during core academic periods would be supported. By December 2013, close to 600 interventionists, reading para-professionals, coaches, tutors, and retired teachers were placed in K-12 classrooms district-wide. Besides adding more staff, the district also invested in additional teacher training and new curriculum. While Kilgore and her team were hopeful that more support would help, they were not willing to take a wait-and-see approach. "There was a real sense of urgency to improve the results," says Superintendent Kilgore. "We were on a search for a solution."

The leadership team thought it essential to gain an in-depth understanding of how best-practice districts support students who struggle and to identify where changes in their current practices might be needed. They therefore decided to engage The District Management Council (DMC) in the fall of 2013 to take a close look at the district's practices, with a particular focus on elementary reading. The DMC study would then benchmark their practices to those of other like-districts and to best practices.



**29,805** students:

53% Black	2.5% Asian
25% White	0.3% Native American
13% Hispanic	0.3% Hawaiian/Pacific Islander
5.7% Multi-race	

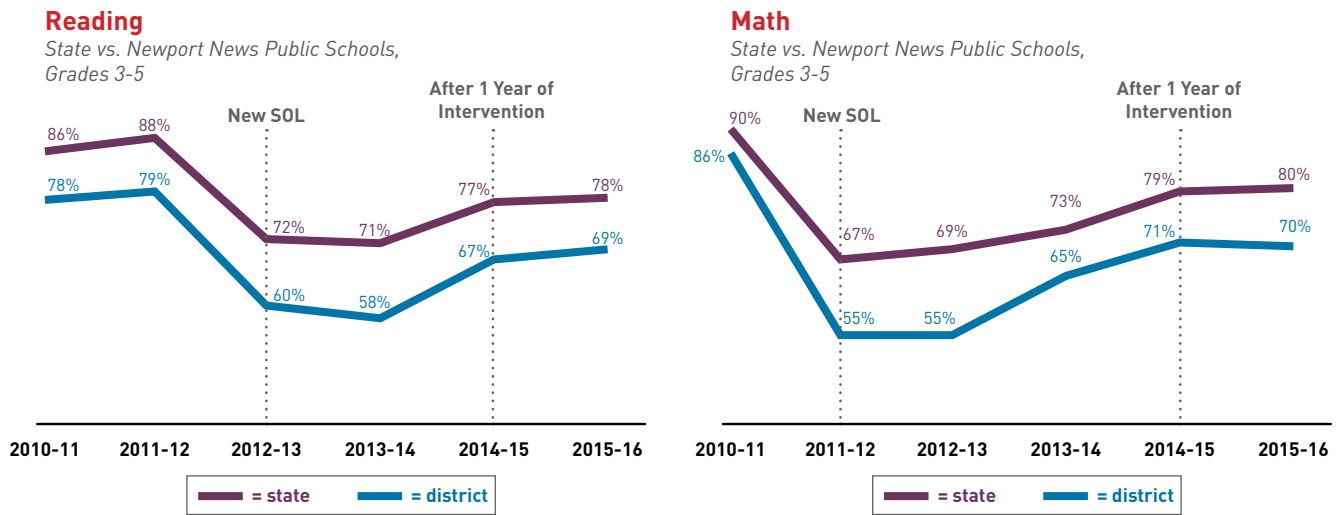
FRL population:

**62.6%**

Special Education identification rate:

**13.3%**

**Exhibit 1 PERCENTAGE OF STUDENTS PASSING THE STANDARDS OF LEARNING (SOL) ASSESSMENT**



Source: Virginia State Department of Education: [http://www.doe.virginia.gov/statistics\\_reports/school\\_report\\_card/index.shtml](http://www.doe.virginia.gov/statistics_reports/school_report_card/index.shtml)

By the spring, it was clear that the addition of staff was not working as hoped. There were some signs of improvement in math; 2013-14 was the third year of the new math standards, and the district had been putting great effort into developing teachers and focusing them on unpacking standards and increasing rigor. But in reading, early testing showed that scores were stagnant. Despite the significant increase in the number of adults, students weren't progressing. Disappointed with these results, the district was determined to take action. With the DMC study completed, district leadership knew what needed to be done in elementary reading to bring the district in line with best practices. The team rapidly moved to implementation, and had the best-practice elementary Response to Intervention (RTI) model well in place for the 2014-15 school year.

The results from the first year were significant: all 24 elementary schools improved in reading that year, some with as many as 21% more students reading at grade level. On average, the reading test scores in grades 3-5 increased nine points, surpassing the state growth of six points. While aimed at improving reading, the interventions implemented also

had a positive effect on math outcomes. In math, the gains achieved in 2013-14 were further enhanced with an additional six-point gain in 2014-15. And, the levels of achievement in both reading and math were sustained in 2015-16 (*Exhibit 1*). By contrast, in grades 6, 7, and 8, where additional staff were added but these additional interventions did not occur, the gap between the district and the state was not reduced, and in some instances actually increased.

Surprisingly, the district was able to achieve these dramatic improvements in outcomes by reallocating existing resources. The key was taking a systems-thinking approach to ensure that the district's precious resources of people, time, and money were being used most effectively and that the efforts were aligned to work in concert to best support students.

**Taking a Deep, Hard Look**

While taking the immediate action of adding additional staff to support struggling students, Superintendent Kilgore made the uncommon move of simultaneously engaging The District Management Council to perform a review of district practices, with a particular focus on elementary reading.

Total number of schools: **37**  
 24 elementary schools  
 7 middle schools  
 5 high schools  
 1 middle/high school combination

Operating budget:  
**\$296**  
 million

Per pupil spending:  
**\$9,928**  
 (FY2016)

Graduation rate:  
**92%**

Dropout rate:  
**2.4%**

Source: <http://www.nnschools.org/overview>  
 Per pupil: <http://www.nnschools.org/overview/documents/costperpupil.pdf>  
 Data is from October 2016, except where otherwise noted.

## The results from the first year were significant: all 24 elementary schools improved in reading that year, some with as many as 21% more students reading at grade level.

DMC set out to examine in fine detail how the needs of struggling learners with and without IEPs were being met in the district. The team from DMC began by spending several days meeting with staff. Representatives from each role supporting struggling learners with or without IEPs attended focus groups. In addition, individuals ranging from key central office leaders to special education paraprofessionals were interviewed individually. The goal of the focus groups and interviews was to paint a clear picture of current practices through a qualitative lens. Questions asked included:

- How is a student identified as a struggling student?
- What data is used?
- How often is data reviewed?
- Are students pulled out of core classes to receive support?
- Who are the adults supporting these students? What is their background? How are they assigned?
- Is there a consolidated intervention plan, or does each elementary school have a different approach?

The interviews and focus groups provided an essential understanding of the different tiers of intervention embedded in each elementary school and in the daily practices of teachers. This information provided the groundwork for developing a clear set of opportunities to improve the support of struggling learners, and helped in tailoring recommendations to district context and culture.

With this qualitative data in hand, the DMC team then turned its attention to quantitative data. The DMC staff began by gathering and analyzing reams of data from the district, as well as gathering from all staff who supported struggling learners information about their typical week's schedule. Using dmPlanning, DMC's proprietary web-based software, staff entered their activities and responsibilities in 30-minute increments for one full school week. As shown in Exhibit 2, dmPlanning captured in fine detail how students were being supported. Data captured included:

- *What is the primary activity? (student instruction, attending a meeting, IEP compliance monitoring, paperwork, or assigned school duties such as bus duty, lunch duty, etc.)*
- *Which students are you meeting with?*
- *What is the group size? Is it one-on-one? If not, how many students are being seen at one time?*

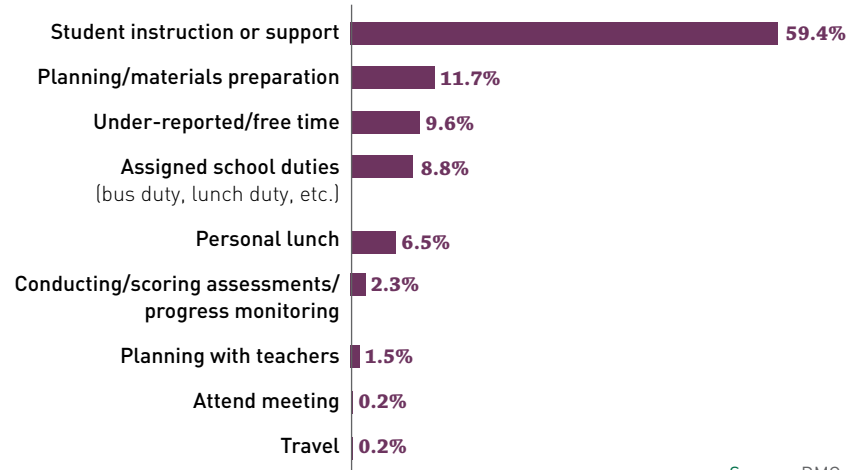
Through this software, 600 staff—close to 95% of all support staff—shared their schedules. The dmPlanning technology was then able to quickly analyze all these weekly schedules and provide a clear view of how service was being delivered in the district. Reports were generated to show how staff spent their time, the number of students each practitioner supported, the average group size, and the percentage of time spent on academic and nonacademic topics.

### Exhibit 2 dmPLANNING SCHEDULE-SHARING PROGRAM

Source: DMC



*Exhibit 3* ELEMENTARY INTERVENTIONISTS' ACTIVITIES  
(ONE-WEEK PERIOD)



Source: DMC

## Surprising Findings Lead the Way for Change

With all this qualitative and quantitative data in hand, DMC was able to analyze and share how the district's practices compared to best practices as defined by the National Reading Panel, What Works Clearinghouse, and other research such as John Hattie's *Visible Learning*. Using its proprietary database, DMC also provided a benchmarking analysis comparing Newport News Public Schools' practices to those of other districts. Based on these analyses, opportunities were developed to improve support for struggling students, specifically with regard to reading.

### 1. Clarify responsibilities

The analysis showed that interventionists performed a variety of activities (*Exhibit 3*). Interventionists spent 9% of their week on school duties, had 10% of their week as free time, and spent an average of only 59.4% of the week on student instruction or support. As a benchmark, classroom teachers spend closer to 85% of their time providing instruction.

A deeper analysis of the data revealed that there was significant variation among interventionists in terms of time spent instructing or supporting students; the average was 59.4%, but among interventionists, the amount of time spent per week ranged from 45% to 74% (*Exhibit 4*). These findings were consistent with information gathered from the interviews and focus groups; many staff cited a lack of definition of responsibilities for interventionists and noted significant variation in responsibility by school. Often, staff were assigned with little instruction on how they should engage with students or at what points in the school day this support should occur.

### 2. Focus on matching teacher skills to student needs

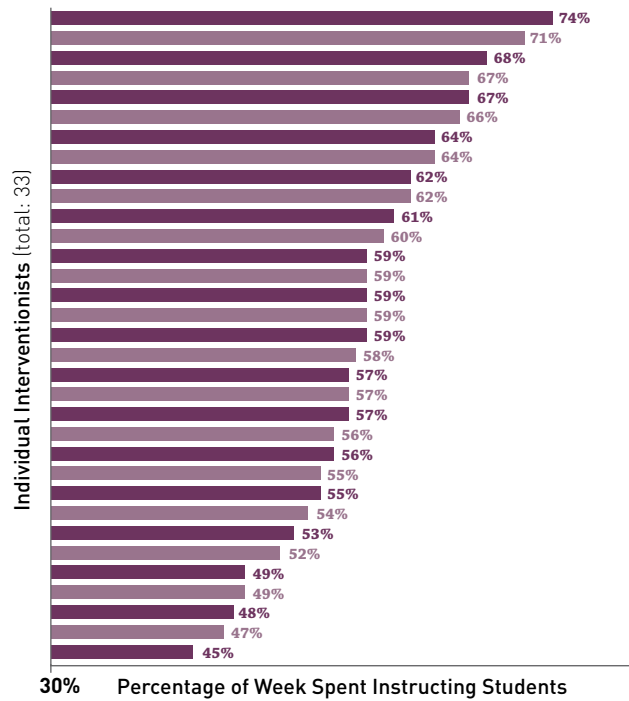
Interviews and focus group data also revealed that staffing assignments were not necessarily aligned with the skills and training of staff members. When NNPS hired an additional 600 support personnel, the focus was on providing support to struggling students as quickly as possible. The rapidity with which the district provided additional support was impressive and well intentioned; however, many of the new staff were generalists and were assigned to positions for which they did not have the appropriate background training and expertise.

### 3. Reconsider the role of paraprofessionals

The analysis showed many paraprofessionals were spending the majority of their time, fully 83% of their week, supporting students academically (*Exhibit 5*). The district was surprised to realize how much of the academic support for struggling students was coming from nonteachers (38% of their time was spent supporting students in reading, and 23% of their time was spent supporting students in math).

In keeping with best practices, students who struggle with reading need to be supported by highly skilled and effective teachers of reading. Paraprofessional support should be focused on students' health, safety, and behavior needs as opposed to academics. Making thoughtful assignments of skilled teachers to match student needs would be essential for success.

**Exhibit 4** PERCENTAGE OF TIME SPENT INSTRUCTING STUDENTS (ELEMENTARY INTERVENTIONISTS)



Source: DMC

**4. Create meaningful extra time for struggling students to learn**

Perhaps the biggest surprise was finding out *when* the “extra help” was being provided. Interviews with staff indicated that students struggling in reading, for example, were often pulled out of the literacy block to receive intervention. Data from dmPlanning confirmed this finding: staff reported that students were pulled from core-class instruction over 60% of the time to receive extra help; therefore, this support was not in fact “extra” help but was replacing core instruction (*Exhibit 6*). To effectively support struggling learners, the district needed to carve out time on a daily basis in addition to core instruction for these students to dedicate to reading and math skills.

**5. Reallocate both time and financial resources**

Like many districts, NNPS had already made a big commitment to intervention staffing, but it wasn’t getting the maximum impact from this expenditure. The district needed to utilize its resources differently. To better serve students who struggle academically, the number of teachers needed to be increased and the number of paraprofessionals providing academic support needed to be reduced. The schedule needed to be actively managed to ensure that every teacher’s time was being scheduled efficiently and that every school had time dedicated to intervention so that extra help was supplied

in addition to, not instead of, core instruction. Active management of instruction delivery would allow better services to be provided at no added cost.

**The Team Takes Action**

Led by the Superintendent, the district leaders invested weeks discussing and understanding these findings and recommendations. They were shocked to see the numbers on pull-out support and the amount of academic support provided by generalists. The team grappled with how their approach differed from best practices. “The detailed analysis of how staff spent their time was essential information that helped us become committed to moving forward,” Superintendent Kilgore observed. “It allowed us to dissect and understand our strengths and weaknesses. It made our path forward clear.” After a few weeks of in-depth conversations, the NNPS team was in full agreement and was determined to improve their interventions. With the support of DMC, the team developed a plan to align their resources and create a strong RTI structure to support struggling learners. While DMC’s study was focused primarily on reading, many of the changes to scheduling and to the approaches to intervention would have positive effects on math as well. Under the leadership of Chief Academic Officer Brian Nichols, the team began to plan for implementation.

Nichols developed a detailed implementation plan to prepare for the fall 2014 launch of the new intervention model. The district leadership team anticipated the buy-in process would be challenging because this large shift in practice would require principals to do significant work over the summer. The team hoped that 10 schools would sign up to pilot the program.

“We made sure the plan was fully thought out before sharing it with stakeholders,” Nichols stated. “It was important that principals and teachers see a concrete plan of how the new model would look, and how their responsibilities would change.” The leadership team focused on the district motto, “Smart is something you become.” They emphasized that kids learn the most when smart structures are in place and skilled adults support them. This plan was focused on putting those smart structures in place and ensuring the right adults were in front of students.

To guide conversations with principals and staff, the leadership team developed a presentation to effectively communicate the urgency for change, explain in detail the best practices, share data about current practices, and outline key steps. The team presented their plan to key stakeholders—principals, teachers, interventionists—in the spring of 2014. Amazingly, an unprecedented 100% of elementary schools signed up for the pilot. The feedback from all 24 principals was that the plan made sense, was crystal clear, and their schools and students needed this intervention model as quickly as possible.

## Aligning Time and Talent

Each principal understood that a key component of supporting struggling learners was carving out extra time each day for instruction. It was essential that this time be outside of the literacy and math blocks and be part of the daily classroom schedule. Over the summer, principals spent one day each week with the CAO and his team to brainstorm, develop, and iterate new master schedules. After the master schedule was developed, principals worked with staff to begin developing daily schedules for interventionists. Each school faced a different series of obstacles, but as a result of strong collaboration and much hard work, each school had a 30-minute intervention and enrichment block in place for the very first day of school.

The second key component was to overhaul the hiring and staffing process for interventionists. The job description for interventionists changed significantly and shifted away from a focus on “generalists.” New roles were created for math interventionists and reading interventionists. The team then looked at the skills, training, and background of all current intervention staff and determined the most appropriate role in the new model for each staff member. To smooth the transition, no staff were let go; with attrition, many of the generalist positions were replaced by staff with the specific skills needed to best serve students.

Another new priority for all school-based leadership teams was to focus on data to assess student learning in intervention groups. The teams developed a process to identify

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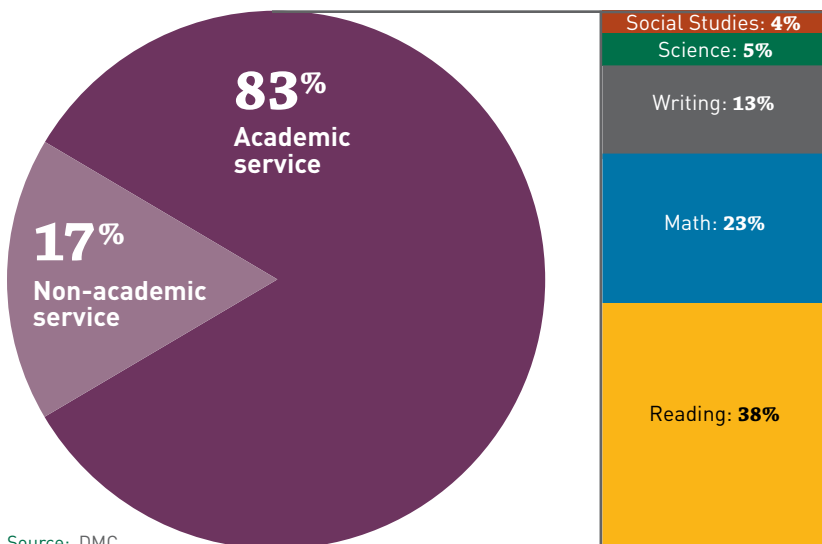
specific skill deficits and place students meaningfully into an intervention group with peers who had similar challenges. “The student isn’t simply in ‘reading’ intervention anymore,” says CAO Brian Nichols. “The student will be in a targeted intervention, such as comprehension strategies for nonfiction reading. We’ve changed intervention from ongoing to finite. The goal is to address their need and keep filling gaps to keep students progressing.” Under the new structure, students are expected to take assessments to pinpoint their needs, and to take assessments before exiting interventions.

## Realigning Existing Resources Brings Results

In the first year, it was already clear that the hard work was paying off. The test results showed that all 24 of the elementary schools saw a gain in reading proficiency levels. Math results, which had already begun to climb the prior year, continued their upward trajectory with an additional six-point gain. By contrast, in grades 6, 7, and 8, where additional staff were added but additional interventions of this magnitude have not yet occurred, gains have been more limited and the gap between the district and the state has not reduced, and in some instances actually has increased.

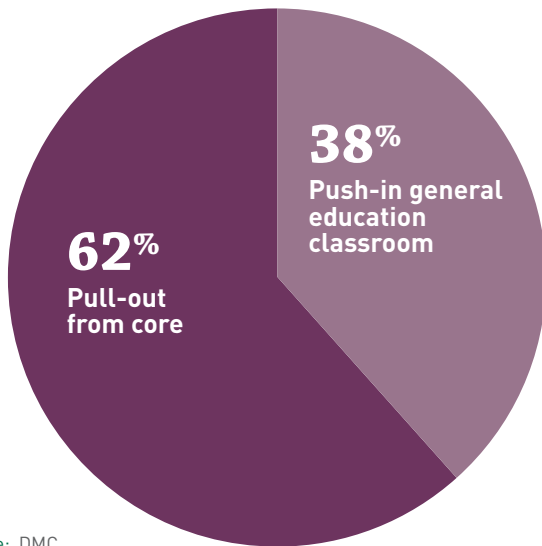
The district cites two elementary schools, McIntosh and Yates, as being particularly good examples of the impact the interventions made. Both schools had the intervention framework solidly in place the first day of school and had no other

*Exhibit 5* **HOW DIRECT SERVICE TIME IS SPENT BY INCLUSION PARAPROFESSIONALS**



Source: DMC

**Exhibit 6 STUDENT INSTRUCTION TIME  
PUSH-IN VS. PULL-OUT FROM CORE**

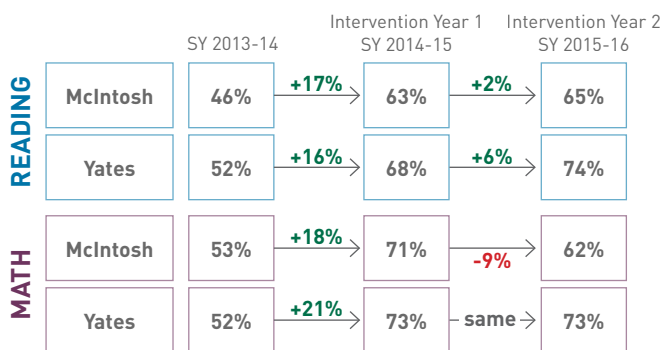


Source: DMC

major changes occur (e.g., student demographics remained constant) over the prior year. Both schools saw significant gains in reading in the first year of the interventions, with further improvements in the following year. Both schools also experienced a significant jump in math scores in 2014-15, which were sustained at Yates the following year, but declined somewhat at McIntosh in 2015-16 after the significant jump the prior year (*Exhibit 7*). The district credits these successes to the scheduling and intervention changes put in place and the strong buy-in from principals and teachers alike, who were determined to get results.

**Exhibit 7 INCREASE IN READING AND MATH TEST SCORES  
YATES AND MCINTOSH ELEMENTARY SCHOOLS**

3rd-5th grades



Source: Newport News Public Schools



**Lessons Learned**

The NNPS team noted four keys to their success:

**1. Effective communication**

All elementary principals understood the systems-thinking approach—the connection between the school schedule; extra time for instruction; strong, skilled teachers; and student learning. Linking these concepts and clearly communicating the rationale for the strategy with key stakeholders was critical to gaining support for this effort. The team attributes the 100% buy-in from elementary schools to the thoughtful communication, the compelling data shared, and the detailed strategy.

**2. Detailed planning**

Principals, teachers, and interventionists were well prepared for the initial fall launch, and were included in the spring and summer planning process. All staff whose lives were going to change were included in the planning process. People felt comfortable asking questions and surfacing challenges, and felt the planning process prepared them to jump into the intervention work in the fall.

**3. Creating a balance between school autonomy and alignment to a district-wide best-practice intervention model**

Schools with a variety of profiles and cultures successfully launched the new intervention model. Both Superintendent Kilgore and Chief Academic Officer Nichols emphasized the importance of understanding the differences between schools. “We had a plan, but allowed principals to interpret this plan for what would work best in their schools,” Superintendent Kilgore stated. While 100% of the elementary schools chose to implement the plan, some faltered at first. They hit roadblocks or lost focus as school got underway.





However, during the first few months, the district had a handful of schools with the intervention blocks in full force; these schools all had very different profiles, cultures, and contexts. Some schools had historically high achievement, while others supported more struggling learners. Seeing schools with a variety of student needs successfully establish the block helped show the way. The schools that initially faltered had excellent examples of successful schools with profiles similar to their own.

#### **4. Believe it is possible to achieve better results with existing resources**

The structural changes and staffing changes were achieved with existing resources. Each school found time for an extra 30-minute intervention and enrichment block—carving out time can be a free initiative; it just has to be made a priority. Some positions were phased out, but the district managed this through attrition and nobody lost their job in this process. The district worked to align existing staff's strengths with students' needs. As attrition occurred, the district stayed focused on ensuring that staff with the appropriate skills were brought in and assigned to working with students.

#### **The Road Ahead**

The district focused on honestly assessing and analyzing its current approaches to serving students who struggle, and was intent on improving results. While proud of its results to date, the leadership team message is clear: our work here is not done. In 2014-15, the focus was on creating time and restructuring staff responsibilities. In 2015-16, attention turned to perfecting the intervention and enrichment block. Central office, principals, and teachers refined the data and measurement tools used to track results and made changes to the interventions as needed. New tracking and monitoring forms were developed that aligned across the district. “[In this intervention model] kids are seeing themselves as successful; they are seeing themselves become smarter.

**[In this intervention model] kids are seeing themselves as successful; they are seeing themselves become smarter. There is a commitment across the district to keep moving forward with this plan.**

—Superintendent Ashby Kilgore

There is a commitment across the district to keep moving forward with this plan,” Superintendent Kilgore reflects with satisfaction and conviction.

Newport News Public Schools was willing to take a hard look at current practices and aggressively work to align its resources—its staff, its time, and its energy—to bring its practices in line with best practices. This meant taking a systems-thinking approach: the district had to focus on understanding the kind of work needed, who was needed to do that work, and when it was to be done. The work then had to be carefully aligned and coordinated. In large organizations like school districts, taking a systems-thinking approach and organizing the various parties to work in concert can be extremely challenging. Set patterns of doing things, long-held beliefs about how things should be done, or a fear of doing things differently when the future of students is at stake can pose impediments to change.

Collecting and analyzing data to promote a common understanding of how things are currently being done and why and how things might need to change are critical steps in building support and getting the process underway. In Newport News Public Schools, this data prompted action and helped rally and align the principals, teachers, and staff. In keeping with best practices, Newport News is engaged in continuous improvement, and each year is working to further refine its practices. As shown in the results, students are clearly benefiting. And perhaps most surprising is that these results were achieved with existing resources. A systems-thinking approach to realigning resources in the district was the key. ♦