

### **3 Creative Ways School and District Leaders Can Maximize Data and Improve Student Achievement**

The widespread collection of data in education has given rise to vast amounts of information. For classroom educators, using data to inform instruction has had a transformative impact on their ability to identify student strengths and weaknesses and differentiate learning. According to the Data Quality Campaign—the nation’s foremost organization advocating for effective data policy and use—when teachers use data to inform instruction, they are better positioned to support improved outcomes for students. For example, Lai and Schildkamp (2013) highlight research demonstrating that when teachers are given time, context, and skills to use data, student achievement improves. The authors assert that the principal reason for this is that data enable teachers to tailor their teaching to address student learning needs.

On the other hand, district-level use of data has been historically driven by accountability requirements, most notably the No Child Left Behind Act of 2001 (NCLB). Using high-stakes standardized tests to assess schools and students puts undue pressure on schools to collect and report data that fulfill one-size-fits-all policy requirements, answering only how schools performed and not the reasons *why* they performed the way they did. In 2015, the Every Student Succeeds Act (ESSA) provided a new opportunity for administrators to focus not only on accountability, but on using student performance data to help make other building/district-level decisions. With the passage of ESSA, administrators are now able to spend less time and energy on once-yearly summative measures and more time focusing on the effective use of formative and benchmark assessment data to drive instruction and improvement across schools and districts.

“It can be challenging to change the culture of a school or district from one that bases decisions on the one-time-a-year outcome measure to one that makes decisions based on data collected throughout the year. However, to substantially improve student outcomes, it is critical that schools and districts develop a culture in which data are used at all levels to make decisions related to policies, programs, placement, and practice” (Geier, 2012, p.1).

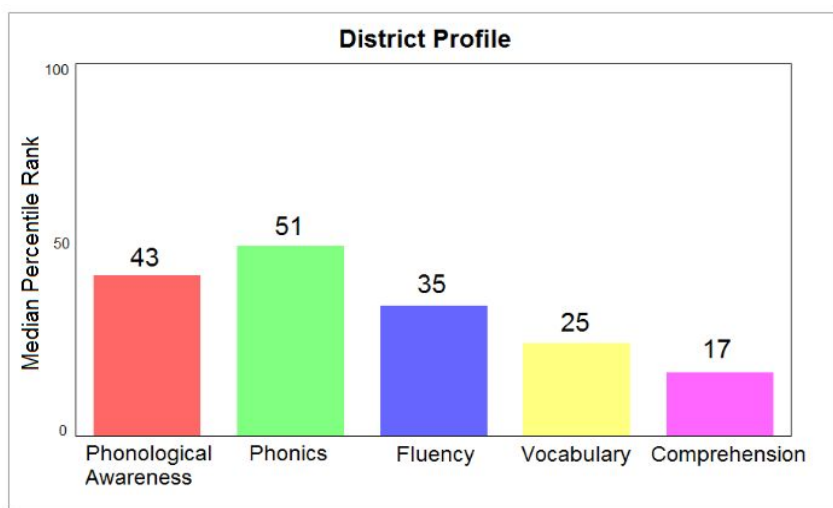
This white paper will examine three areas in which district leaders can use data to uncover opportunities for improvement: curriculum, resource allocation, and professional development.

## Data helps school and district leaders uncover opportunities for improvement

Historically, the majority of data training has taken place at the classroom level to help teachers better understand the applications and benefits of data-informed decision-making, but data training must also occur at the school and district levels. Data helps school and district leaders develop a blueprint with measurable results, instead of basing important decisions on requests, opinions, or insufficient information. According to Arne Duncan, United States Secretary of Education from 2009 through early 2016, “Data gives us the roadmap to reform. It tells us where we are, where we need to go, and who is most at risk” (US Department of Education, 2009).

In the same way that student profiles help teachers target instruction by including students’ strengths and weaknesses, identifying information, grade, etc., this information should be aggregated to the school and district levels to create school- and district-wide profiles. For teachers, developing data-informed student profiles to understand how students learn has a tremendous impact on identifying student needs and planning effective supports. For administrators, understanding the educational strengths and weaknesses across schools helps them to not only identify student needs at an aggregate level, but also hone in on how they can make impactful decisions about curriculum, professional development, resource allocation, etc. According to the West Virginia Department of Education, focusing on data throughout the school improvement cycle has the potential to yield a great change from what administrators have used in the past to drive their decision-making regarding student learning.

### Example Profile



Here is an example of a district profile. This district has relatively strong phonological awareness and phonics skills, but is struggling with fluency, vocabulary, and comprehension. When thinking about the simple view of reading—word recognition + language comprehension = reading comprehension (Hoover and Gough, 1990)—this district appears to have some challenges in the language domains that are impacting overall reading comprehension. Based on this example district profile, here are three areas in which a district leader can use data-informed decision-making to uncover opportunities for improvement.

This example profile will be referred to throughout the subsequent sections of this paper.

### **Opportunity 1: Curriculum review**

According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO), good curriculum plays an important role in forging lifelong learning competencies. Curriculum review is a critical opportunity to evaluate the effectiveness of current curriculum selections and determine the impact on student achievement. There are many new and emerging challenges to education and demands on curriculum (e.g. digital literacy requirements, a growing English language learner population, and more rigorous state standards), which is why continuously monitoring and evaluating the implementation of curriculum and its responsiveness to new challenges from state or federal requirements is crucial.

In districts that don't use data, the same curriculum decisions can be repeated year after year with minimal adjustments. Even when districts attempt to examine school data, they often only scratch the surface. For example, most schools will start by examining their end-of-year state tests and comparing the results to those from the year prior to see if there has been growth in student performance. While this approach represents a good start to using data, it is still quite minimal. In a district that more effectively uses data-informed decision-making, a district leader will look at many different types and levels of student data, such as growth on other measures, or determine whether progress has been made only in certain grades or in a specific literacy domain. Examining school-wide data aids in the consideration process as to whether and how to adapt the curriculum based on information about students' strengths and weaknesses.

### **Example based on district profile**

The example district profile mentioned earlier in this paper shows that students are doing well in some areas (phonological awareness and phonics) and not as well in others (fluency, vocabulary, and reading comprehension). If the problem is determined not to be related to professional development or resource allocation, it may be that current curriculum selections are not addressing the areas of need. Based on the profile, the first step for district leaders is to review the curriculum that was selected to meet the fluency, vocabulary, and overall reading comprehension needs of their students. Perhaps this is a district with a high ELL population or students from low-income families who have limited exposure to advanced language at home. Using this data, the district may want to focus on a more comprehensive approach to curriculum and/or assessments that address academic language and other areas that can help improve overall reading comprehension rather than selecting curriculum to work on fluency, vocabulary, and reading comprehension in isolation.

### **Opportunity 2: Professional development**

In a 2009 study, researchers found that while 90 percent of teachers reported participating in professional development, most of those teachers also reported that it was “totally useless” (Darling-Hammond et al, 2009). Continuous professional development is critical to ensuring competency in every profession, so as the field of education continues to evolve, it is imperative that professional development for teachers is effective and addresses the areas of greatest need.

Determining teacher learning goals for professional development is driven by identifying school and district instructional goals. To determine instructional goals, all available data sources should be reviewed, including summative and interim assessments, behavior records, and curriculum maps. Using data-informed decision-making ensures professional development resources target these exact areas of improvement.

One common professional development mistake is assuming all educators need the same kind or the same level of professional development. Data helps administrators determine which teachers should participate in which sessions (i.e. all of them, a certain grade, specialists, etc.)

and can help divide educators into various learning levels (e.g. beginner, intermediate, advanced, etc.) In this regard, educators—just like students—greatly benefit from differentiated learning.

### **Example based on district profile**

Returning to the example profile, if the district has the proper resources in place, the next step is to ensure that teachers have the appropriate professional development to know how to effectively teach vocabulary and comprehension strategies and/or how to use a particular program that addresses those skills with fidelity. The data can help district leaders understand a broad area of professional development needs (such as in the profile example), but taking this a step further by examining additional data might uncover more of the specifics. For example, vocabulary may emerge as an area of professional development, but upon further examination, a district leader could determine that the specific skill gaps relate to multiple meaning words, idioms, similes and metaphors, etc. that are not only challenging to students, but challenging for teachers as well. Similar to the curriculum discussion, administrators should also review this data by grade and school to make sure the professional development is targeted and differentiated for the needs of the various teachers in the district.

### **Opportunity 3: Resource allocation**

When administrators allocate resources, they are tasked with determining the ways in which their time and money will address educational goals. In some instances, an administrator may allocate an equal amount of resources to every school in the district. However, some schools may require far more resources than others to maintain educational equity for their students.

In addition to the level of resourcing and how the resources are distributed across schools, educational leaders must also pay close attention to how these investments translate into improved learning. According to Matthew Lynch, Ed.D., editor of *The Edvocate*, effective leaders know how to use data strategically to inform resource allocation decisions and to provide insights about how productivity, efficiency, and equity are impacted by allocated resources.

### **Example based on district profile**

As the district leader breaks down the example district profile data by school and then by grade, she sees that the lowest performance data is primarily coming from fourth-grade students in one of the five elementary schools in the district. The profile shows that the fourth grade is falling behind in fluency, vocabulary, and comprehension; this helps answer the question, “Where should I allocate resources?” The district leader should compare the results to the decisions made at the beginning of the year. For example, if a new program was purchased for the school, was it only allocated to certain grades? If not, the profile could indicate the need to purchase a specific tool to get the fourth grade back on track. The more data is examined, the more information can be extracted. For example, the district leader may uncover that the school does not have the proper hardware it needs to implement a blended learning program with fidelity. To remedy this, one of the laptop carts assigned to the district could be shifted to that school, the principal could review the computer lab schedule to see if fourth-grade students can have more time, or the two paraprofessionals available during the reading block could be assigned to split their time between the fourth-grade classrooms in that school.

### **Summary**

Data-informed decision-making at the school and district level boils down to creating a plan to obtain the right information at the right time. When used effectively, it can help provide a profile of strengths and weaknesses leading to decisions that will help close achievement gaps by improving curriculum, fine-tuning professional development, and maximizing the use of limited funds and resources to achieve the best impact possible on student achievement.

