



Using Data-Driven Performance Management to Achieve District Goals

By Lynzi Ziegenhagen and Rachel Ruffalo

Executive Summary

The No Child Left Behind Act (NCLB) of 2001 put standardized test scores under a microscope; its successor, the Every Student Succeeds Act (ESSA) of 2015, is broadening that focus to include multiple academic indicators, as well as other metrics, such as school climate and educator engagement (Klein, 2015). As states in the US develop their accountability plans for implementing ESSA, school districts must now monitor and demonstrate growth with a greater number of student achievement metrics. While this shift in focus may prove to be challenging for many districts, it also presents an opportunity for districts to better align their practices and policies with holistic student learning goals that are not only responsive to their state's accountability plan but also reflective of local goals for student learning.

This white paper offers a review of recent literature on the goal setting and monitoring practices used by effective school systems and illustrates how effective data-driven performance management systems can help school systems monitor and achieve their goals. It includes a description of the features that make a performance management system effective, as well as how a data-driven performance management system can lead to continuous improvement and sustained growth in student achievement. Lastly, the paper includes a description of how one data management system—Schoolzilla's multiple measures dashboard, Mosaic—demonstrates the features identified by research for effective performance management systems.

Introduction: The Evolution of Accountability

Two trends in public education accountability are merging; therefore, creating an expanded role for school districts:

- ▶ The inclusion of more metrics, beyond test scores, in state and federal accountability plans
- ▶ A growing recognition of central offices' essential role in supporting schools to improve learning

In the 1980s, former secretary of education William Bennett maligned school district superintendents, office staff, and board members as part of the “education blob” who gobble up resources without having any positive impact on student achievement (Waters & Marzano, 2006). This sentiment was further reflected in federal policies that bypassed or ignored the role of school districts in improving student achievement, while targeting reform efforts at individual schools or at the state level (Massell, 2000; Honig & Copland, 2008). As a result, district central offices were relegated to business and compliance functions, rather than supporting the achievement of student learning goals (Honig, 2013).

Even after the passage of NCLB and the Comprehensive School Reform (CSR) program in 2001, turnaround efforts and funds were narrowly focused on raising standardized test scores at individual schools and not on systemic change at the district level. Despite the \$235 million poured into reform efforts at individual schools, students were only able to achieve spotty improvements in performance because schools were often unable to implement and sustain the reforms due to their lack of capacity to change the existing structures and practices of the larger system (Zavadsky, 2013).

Reform efforts from the past two decades have indicated that without central office support, initiatives often fail to take hold or to spread to other schools in the district (Honig & Copland, 2008). But recent federal and state policies, as well as independent educational initiatives, are now recognizing the importance of central offices in the improvement process (Rorrer, Skrla, & Scheurich, 2008).

With greater public accountability for an ever-growing number of metrics, today's school district central offices must address the “mismatch between new school performance demands and traditional central office work and capacity” (Honig, 2013).

While this shift in focus may present challenges to traditional roles and structures, it also presents a fresh opportunity for central offices to make systemic changes to support student learning. To effectively address this new role, central offices must now operate as a support system for improving the quality of instruction and learning district-wide (Honig, 2013). In fact, school districts are uniquely situated to provide a balance of loose and tight coupling with schools—holding schools accountable for meeting their goals while providing them the support and capacity needed to achieve those goals (Levin, Datnow, & Carrier, 2012).

How School District Central Offices Can Positively Impact Student Achievement

Despite Bennett’s characterization of the central office of school districts as part of the “blob,” research the significant positive contribution of district leadership on student achievement. In a meta-analysis of twenty-seven quantitative research studies, researchers found a positive, statistically meaningful relationship between district leadership and student achievement. The researchers identified the following five specific district leadership responsibilities that have the greatest positive correlation with student achievement (Waters & Marzano, 2006):

1. Collaborative goal setting
2. Non-negotiable goals for achievement and instruction
3. Board alignment and support of district goals
4. Monitoring goals for achievement and instruction
5. Use of resources to support achievement and instruction goals

All five of these district leadership responsibilities relate to setting goals and focusing on them.

Data-Driven Performance Management Systems

In a study on the impact of leadership on student achievement, researchers noted that high quality leaders set clear goals that are widely understood, establish high expectations, and use data to track progress and performance (Leithwood, Louis, Anderson, & Wahlstrom, 2004). In another study, researchers concluded that using a performance management system was key to helping school district offices successfully transform from playing a traditional compliance role to a service-oriented role, focused on student learning goals. However, researchers

underscored that simply having a management system was not enough.

“Performance management systems were only effective when they ‘generated data that staff saw as relevant to informing their daily work’ and that helped staff use the data to actually improve” (Honig, 2013).

In her book, *School Turnarounds: The Essential Role of School Districts*, Heather Zavadsky (2013) notes that education and reform organizations have recently identified school district central offices to be the logical “catalyst and hub” for activating and managing the essential elements that are needed to raise student achievement. Zavadsky further notes that one of these essential elements is a “comprehensive performance management and accountability system” provided that the users have trust of and access to the data.

The Southern Regional Education Board concurred with a 2010 report that stated, “Current state assessment and accountability systems give schools end-of-the-year data, but schools need actionable data on an ongoing basis.” Multiple studies have similarly cited effective use of data by school and district personnel as a central tenet in school improvement processes (Chrispeels, 1992; Earl & Katz, 2002; Protheroe, 2001; Wayman & Stringfield, 2003). In a 2006 publication, the New Schools Venture Fund wrote that an essential part of the cycle of instructional improvement is setting goals and continually measuring progress toward them. In their book *Data-Driven Leadership*, Datnow and Park (2014) write that the process of continual improvement involves more than collecting and looking at student achievement data. “A deep process of inquiry using multiple sources and types of data is essential in developing instructional plans that will improve student achievement” (p. 97).

Features of Effective Performance Management Systems

Effective data management and inquiry processes can guide decision-making processes related to curriculum, instruction, and professional development (Levin, Datnow, & Carrier, 2012). It is clear from multiple studies of high-performing districts that an effective performance management system helps to activate, guide, and provide feedback to educators working to support the following: 1) high quality instruction, 2) a culture and environment conducive to learning, and 3) the removal of barriers to learning. These are all essential elements to improved student achievement.

Based on an analysis of the research and literature in this area, the following five

features have emerged as the most essential to effective performance management systems:

1. Timely and verified data

Researchers have noted that teachers and educational leaders are unlikely to act on data if they do not trust the data's accuracy and completeness. Therefore, having a high-quality data verification process is essential for the effectiveness of any performance management system. When data quality is trusted, users can begin to analyze the data for insights into curriculum, instruction, and student achievement (Datnow & Park, 2014; Ikemoto & Marsh, 2007; Ingram, Louis, & Schroeder, 2004).

Also contributing to the quality and relevance of data is timeliness; educators must have current, accurate, and relevant data to make appropriate decisions regarding student interventions, professional development needs, and instructional revisions (Datnow & Park, 2014; Foley & Sigler, 2009). In fact, research has identified outdated or delayed data as a primary barrier to effective data use.

2. Visibility into outcome gaps through data disaggregation

Effective performance management systems must allow educators and leaders to easily view outcome gaps through different lenses, including student demographics, student performance, student attendance, student program participation, and other factors relevant to students' experiences in school (Bernhardt, 2000; Holcomb, 1999; Johnson, 2002; Love, 2000; Protheroe, 2009). A high level of disaggregation often results in new insights, changed perceptions (Bensimon, 2004) and challenges to tacit beliefs and biases, especially of socioeconomically disadvantaged students (Armstrong & Anthes, 2001). Research has shown that disaggregated data serves as a catalyst for displacing deficit views of students (Skrla & Scheurich, 2004). Educators who analyze disaggregated data—especially when benchmarked against demographically similar districts or schools—are more likely to have higher expectations for students and a stronger conviction that teachers and schools can improve the achievement of previously low-performing students (Armstrong & Anthes, 2001).

3. Integration of multiple data sources

To achieve a high level of disaggregation of data, a performance management system must have the capacity to integrate multiple databases and data sources. Integrating the “separate silos of data” enables leaders to see the big picture (Herold, 2014, 2016) and helps school teams identify professional development and programmatic needs (Lachat & Smith, 2005; Wayman, Stringfield, & Yakimowski, 2004).

Reports at multiple levels—student, classroom, school, and district—provide educators with multiple perspectives on progress toward goals while also serving to build a culture of shared accountability for student achievement (Datnow & Park, 2014; Earl & Katz, 2002; Feldman & Tung, 2001). It is also essential that the formats of the reports be visually meaningful to school leaders and teachers (Rudner & Boston, 2003; Schwartz, 2002; Streifer, 2002; Thorn, 2001).

When educators are able to compare different types of student performance data, they are able to better examine the assumptions about the factors contributing to student achievement (Lachat & Smith, 2005). For example, comparing student performance on standards-based assessments with performance on classroom assessments enables educators to determine the extent to which their curriculum and instruction are aligned with state standards.

Many researchers also cite the importance of monitoring process data, such as student engagement and school culture—and not just outcome data. Process data provide valuable indicators of progress toward outcomes and of the implementation fidelity of the curriculum and instructional practices (Foley & Sigler, 2009; Park, Hirokawa, Carver, & Nordstrum, 2013).

4. Capacity development for all users

Building the capacity of users at all levels is essential for the effectiveness of a performance management system (Levin, Datnow, & Carrier, 2012). Capacity building not only increases knowledge and skills to improve educators' abilities to effectively act on data, but it also increases their motivation to do so. Michael Fullan (2006), while writing about change theory, noted that "New capacities are a route to motivation," (p. 9), and that motivation is an essential component of growth and improvement. Research has found that timely user training and support, ongoing professional development in data analysis, and access to data coaches effectively support the use of data to improve student outcomes (Datnow & Park, 2014; Datnow, Park, & Wohlstetter, 2007; Lachat & Smith, 2005).

While some large districts have developed their own data management systems internally (Zavadsky, 2013), many mid- to small-size school systems lack the technical and personnel capacity to build, warehouse, and manage their own data systems. Some of these school systems have contracted with external agencies and organizations to warehouse and manage data and to assist with their capacity-building efforts (Datnow, Park, & Wohlstetter, 2007; Honig & Copland, 2008; Marsh et al., 2005). In some cases, an external support provider serves as the data coach, working closely with an internal data team to build the data culture of the district, ensure data quality, and to build the internal capacity of staff to use data effectively. Case studies

indicate that as the data team matures, the role of the data coach decreases as the data systems and practices become institutionalized in the district and schools (Lachat & Smith, 2005).

5. Embedded within supportive practices and policies

For a performance management system to be effective, it must be embedded within a system of practices, policies, and routines that creates a collaborative environment and supports holistic and continuous analysis of relevant data (Datnow & Park, 2014). In documenting the successful turnaround efforts of five large, urban school districts, Zavadsky (2013) noted that all five districts had strong performance management systems that were closely aligned with the districts' strategic plans. These systems housed multiple types of data. The districts developed structured monitoring systems to effectively analyze the data, providing staff with sufficient time to review, interpret, and respond to the data. Researchers cite the following district practices that have supported the use of a performance management system for continuous improvement:

1. Sufficient time dedicated to regular and collaborative data analysis and reflection (Cromey, 2000; Datnow & Park, 2014; Elmore, 2004; Holcomb, 1999, 2001; Ingram, Louis, & Schroeder, 2004; Love, 2000; NCREL, 2003; Protheroe, 2001; Rallis & MacMullen, 2000)
2. Alignment with the school system strategic plan (Foley & Sigler, 2009; Schools, 2006; Zavadsky, 2013)
3. A focus on student achievement (Datnow & Park, 2014; Datnow, Park, & Wohlstetter, 2007; Ingram, Louis, & Schroeder, 2004; Lachat & Smith, 2005; Park, Hirokana, Carver, & Nordstrum, 2013; Rothman, 2000; Sammons, Hillman, & Mortimore, 1995; Schmoker, 2003)

How Schoolzilla is Helping Districts Track Their Performance

Recognizing the challenges and opportunities facing school district leaders in today's accountability context, Schoolzilla has created Mosaic, a multiple measures dashboard system that embodies the features of effective performance management systems, as identified by research.

Developed in collaboration with partnering school districts, Schoolzilla designed Mosaic's dashboards to help educators track key performance indicators (KPIs) and goals for their district, schools, and students. Mosaic supports education leaders who are implementing their strategic plan, monitoring and improving performance on state accountability systems, or sharing progress with their teams, school boards, and communities. District leaders can customize the system to align with their unique goals and existing data systems.

Mosaic includes five key dashboards:

1. A district profile, showing real-time updates on the district's strategic goals
2. A school comparison list, so district leaders can quickly see how every school is performing
3. A school profile, showing which goals a school is meeting and where it needs support
4. A student comparison list, so teachers can sort and group students using multiple data points that help show whether they are on track
5. A student profile, so teachers and parents can see all the essential data about whether a student is on track

School systems using Mosaic are able to select from a menu of best practice metrics to include on their dashboards. The Mosaic team built its menu of metrics by reviewing relevant research, talking to expert partner organizations, reading strategic plans from districts across the country, and studying state accountability systems. The metric menu includes some of the most important outcomes schools strive for—such as graduation and standards mastery rates—and powerful predictors of those outcomes—such as attendance patterns, course grades, disciplinary incidents, and reading at grade level.

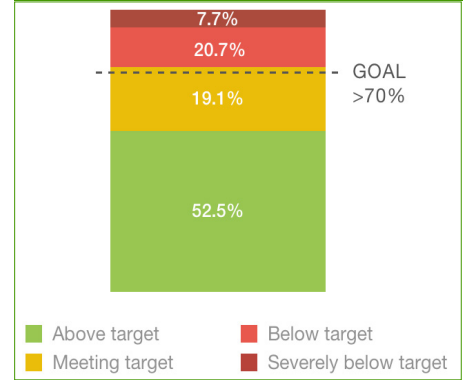
Schoolzilla will add to the menu with each update to Mosaic. Mosaic will also allow district leaders to define and track their own custom metrics.

Share your latest results & growth



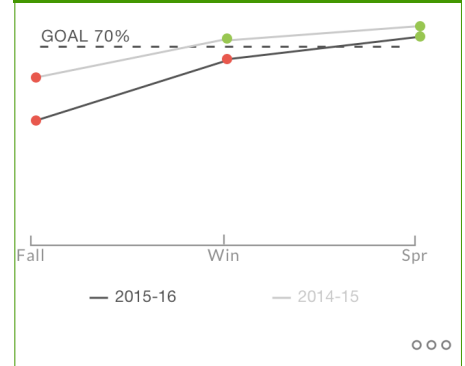
Overall District Performance

See distributions



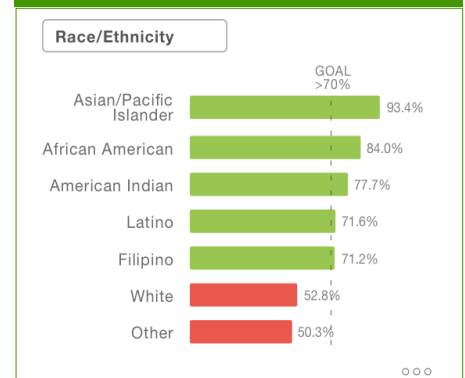
Performance Levels

Celebrate growth



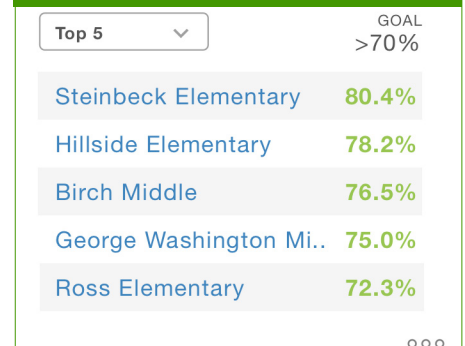
Trends

Address equity



Student Groups

Target follow-ups



Top 5 / Bottom 5 Schools

How Mosaic Aligns with the Research on Effective Performance Management Systems

Features of Effective Performance Management Systems	Features of Mosaic
Timely and verified data	<ul style="list-style-type: none"> ▶ Data Quality Dashboards help districts find and fix incomplete, unreliable, and unidentifiable data points ▶ Once district data is in the Schoolzilla environment, the Schoolzilla team works closely with district staff to conduct a comprehensive assessment of the data quality and fix any issues that make the data unreliable ▶ Live data feeds from district’s student information system as well as other district data systems
Visibility into outcome gaps through data disaggregation	<ul style="list-style-type: none"> ▶ Multiple types of data that can be disaggregated by a wide variety of factors ▶ Customizable dashboards from the Schoolzilla Dashboard Library show exactly the relevant data insights for each customer
Integration of multiple sources of data	<ul style="list-style-type: none"> ▶ Over sixty connectors with data sources, with new connectors being added each week ▶ Schoolzilla Data Warehouse provides one secure place to keep all district data ▶ Schoolzilla Dashboard Library includes dozens of dashboards that support deep-dive analysis ▶ Districts in the Schoolzilla community also get access to data visualization tools, Tableau Desktop, and Tableau Server that allows them to build custom dashboards quickly
Capacity building for all users	<ul style="list-style-type: none"> ▶ District staff leading performance management efforts are supported by a dedicated Schoolzilla Impact Manager who works with districts to strengthen district data culture, refine performance management strategy, and plan customized trainings appropriate for the district ▶ District staff can participate in Schoolzilla’s online community, the Data Champion Hub, and in Schoolzilla’s annual community gathering, Data Champion Summit
Embedded within supportive practices	<ul style="list-style-type: none"> ▶ Schoolzilla works with customers to ensure that their Mosaic dashboards are aligned with the strategic plan and learning goals of the school system

Conclusion

Based on the changing accountability landscape and the growing recognition of the importance of central office leadership, school district leaders now have the opportunity to more greatly influence student achievement. A meta-analysis of twenty-seven quantitative research studies on district responsibilities has identified setting goals and monitoring progress toward achievement as most significant to student achievement. But research also indicates that simply collecting and reviewing data is insufficient for continuous improvement of student achievement. Based on a comprehensive review of the literature, there are five essential features of effective performance management systems:

1. Timely and verified data
2. Visibility into outcome gaps through data disaggregation
3. Integration of multiple sources of data
4. Capacity building for all users
5. Embedded within supportive practices

Mosaic can be customized to align with each district's unique goals and data systems. Developed with input from more than fifty school systems, Mosaic embodies the features of effective performance management systems identified by research. Mosaic can play a central role in helping school systems support, monitor, and achieve their goals for all students.

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