

Education
Group

MARINER

**Bringing Data-driven Decision Making
to Desktops in your District**

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What is a District Data Dashboard?

The sole purpose of a district data dashboard is to communicate important information quickly and easily. Just like the dashboard in your car helps you travel safely from one point to another, a dashboard on your desktop is a visual display of the most important information you need to achieve one or more objectives. Typically the information is consolidated and arranged on a single screen so the information can be monitored at a glance.

It’s important to note that “at a glance” is a key component of a dashboard. If you have to spend time figuring out how hot the engine is or how low the oil pressure is, you run the risk of breaking down before you reach your destination. Similarly, in the workplace, it is often easier, faster and more direct to show results against the desired outcome rather than see data and spend time trying to figure out what it means. And the more data you are trying to use and understand, the more valuable a dashboard becomes, allowing you to monitor vast amount of data and make data-driven decisions.

Many people use the term dashboard and scorecard interchangeably, however they are different. A scorecard displays key performance indicators (KPIs) and how well you are doing in that area of performance against a specific stated goal. A dashboard usually contains a few related scorecards, gauges or other visual representations grouped together into a single view to tell a story, convey a trend or isolate issues.

In addition, people sometimes use the terms “dashboard” and “scorecard” to refer to different types of software applications for delivering

Scorecards are collections of KPIs, baseline data, targets and indicators.

Dashboards are collections of scorecards and other performance

performance information. What’s most important to remember is that dashboards and scorecards, whether in your car or on your computer, are visual display mechanisms within that convey critical performance information at a glance.

	Actual	Progress	2010 Target
Advanced Placement Passing Scores		🟡	62%
End of Course Composite Passing Scores	70%	🟡	80%
End of Grade Math Passing Scores	68%	🟡	88%
End of Grade Math Economic Gap	29%	🟡	10%
End of Grade Math Ethnic Gap	37%	🟡	10%
End of Grade Reading Passing Scores	55%	🔴	95%
End of Grade Reading Economic Gap	34%	🔴	10%
End of Grade Reading Ethnic Gap	41%	🔴	10%
Writing Passing Scores	63%	🟡	80%
Writing Economic Gap	29%	🟡	10%
Writing Ethnic Gap	34%	🟡	10%
Students Dropping Out		🔴	4.08%
Students Graduating on Time		🔴	84%
North Carolina ABC’s High Growth Schools		🔴	80%
Graduating Senior Participation - SAT		🔴	75%
SAT Average Score		🔴	75%

	DASHBOARD	SCORECARD
Purpose	Measures performance	Charts progress
Users	Supervisors, specialists	Executives, managers, staff
Updates	“Right-time” feeds	Periodic snapshots
Data	Events	Summaries
Display	Visual graphs, raw data	Visual graphs, text & comments

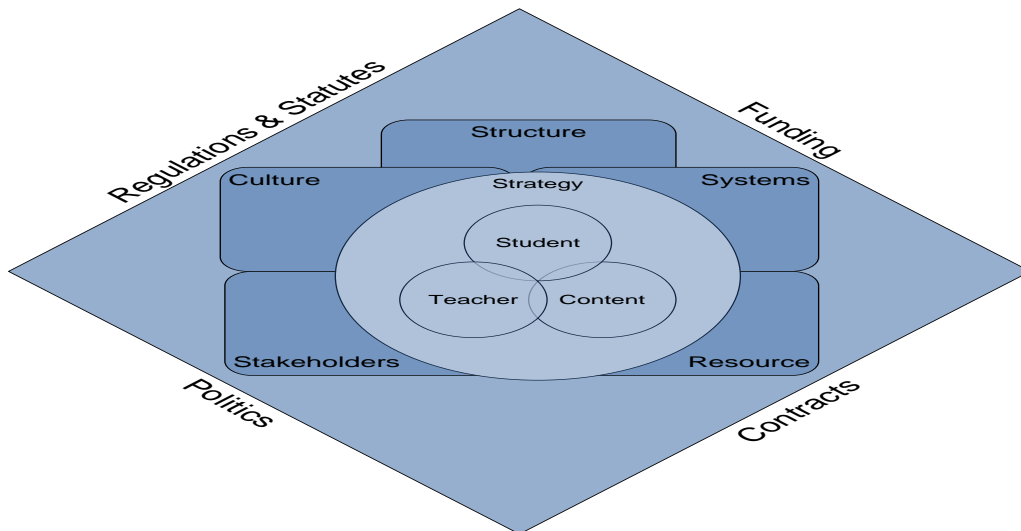
The Need for Dashboards in Education

To make teaching and learning more effective, a district’s improvement strategy must articulate how it will strengthen and support integrated activities that increase teachers’ knowledge and skill, change the students’ role in the teaching and learning process, and ensure that curriculum is aligned with benchmarks for performance.

The instructional core represents the critical work of teaching and learning that goes on in the classroom.

- Teachers’ knowledge & skills
- Students’ engagement in their own learning
- Academically challenging content

Surrounding the instructional core is strategy – the set of actions a district deliberately undertakes to strengthen the instructional core with the objective of increasing student learning and performance district wide. According to the Public Education Leadership Project at Harvard University, the figure below represents the elements of a sound educational approach.



Culture – The culture of an organization is based on the norms and behaviors in that organization; in other words, everyone’s shared understanding of “how things work around here.” Successful districts must develop a culture of collaboration, high expectations and accountability through their schools.

Systems – School districts manage themselves through a variety of critical systems. Whether formal or informal, the purpose of systems is to increase the district’s efficiency and effectiveness in implementing strategy.

Resources – Organizational resources include money, people, time and other assets such as technology and data. District leaders must allocate the full range of resources in ways that are coherent with the district’s strategy if it is to be implemented effectively. This means being disciplined about which current and planned activities receive necessary resources and, just as importantly, which do not.

Stakeholder Relationships – Stakeholders are people and groups inside and outside the organization who have a legitimate interest in the schools and can influence the success of the district’s strategy. Effective strategies are formed by the views and priorities of all groups. In moving ahead, district leaders must either persuade a majority of stakeholder groups about the wisdom of their strategy or build a sufficient alliance among some that will prevent the others from becoming a disruptive force.

Environment – Includes all of the external factors that can have an impact on strategy, operations, and performance. It is especially complex and dynamic, including the various funding sources available (both public and private); the political and policy contexts at the city, state, and national levels; the collective bargaining arrangements that are in place; and the characteristics of the particular community. It can affect a school system by enforcing nonnegotiable demands, constraining decision-making, reducing resources, evaluating performance, and imposing sanctions. It can also be an enabler if district leaders can promote an understanding of the schools’ needs and thus influence the regulatory and statutory, contractual, financial, and political forces that surround them.

Using Dashboards in Education

Today volumes of data are overwhelming school educators and administrators.

Dashboards can effectively help bring focus to the most important information and functions of an organization – if. When targeted correctly, designed effectively and implemented well with supporting processes in place, dashboards become important tools for moving the dial on student performance. This white paper is designed to help Board of Education members and administrators to understand how district dashboards can improve transparency, accountability and ultimately student achievement.

All school districts strive for academic and operational success; however, keeping student achievement high for all students and closing the gap requires the Board of



Education and the district central office to constantly monitor the efficacy of programs and focus limited resources where it improves performance the most.

Most school districts rely on disparate, disconnected systems which store data. It is typical within a district to have a separate student information system, separate HR and financial systems, and a home-grown data warehouse. Having all of these separate systems makes it difficult to understand trends, program effectiveness and ultimately, student achievement. In addition, separate systems require school districts to spend time and effort trying manually aggregate and disaggregate data to made decisions at the district, Board of Education and community levels. The complexity of processes, data, measures, systems and strategic elements is overwhelming for many school districts.

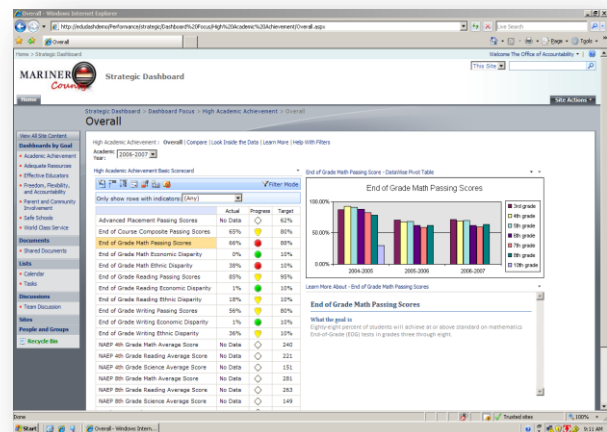
What is a District Dashboard?

District Dashboards allow the Board of Education and the central office to see, at a glance, whether district improvement efforts are on track. Scorecards with Key

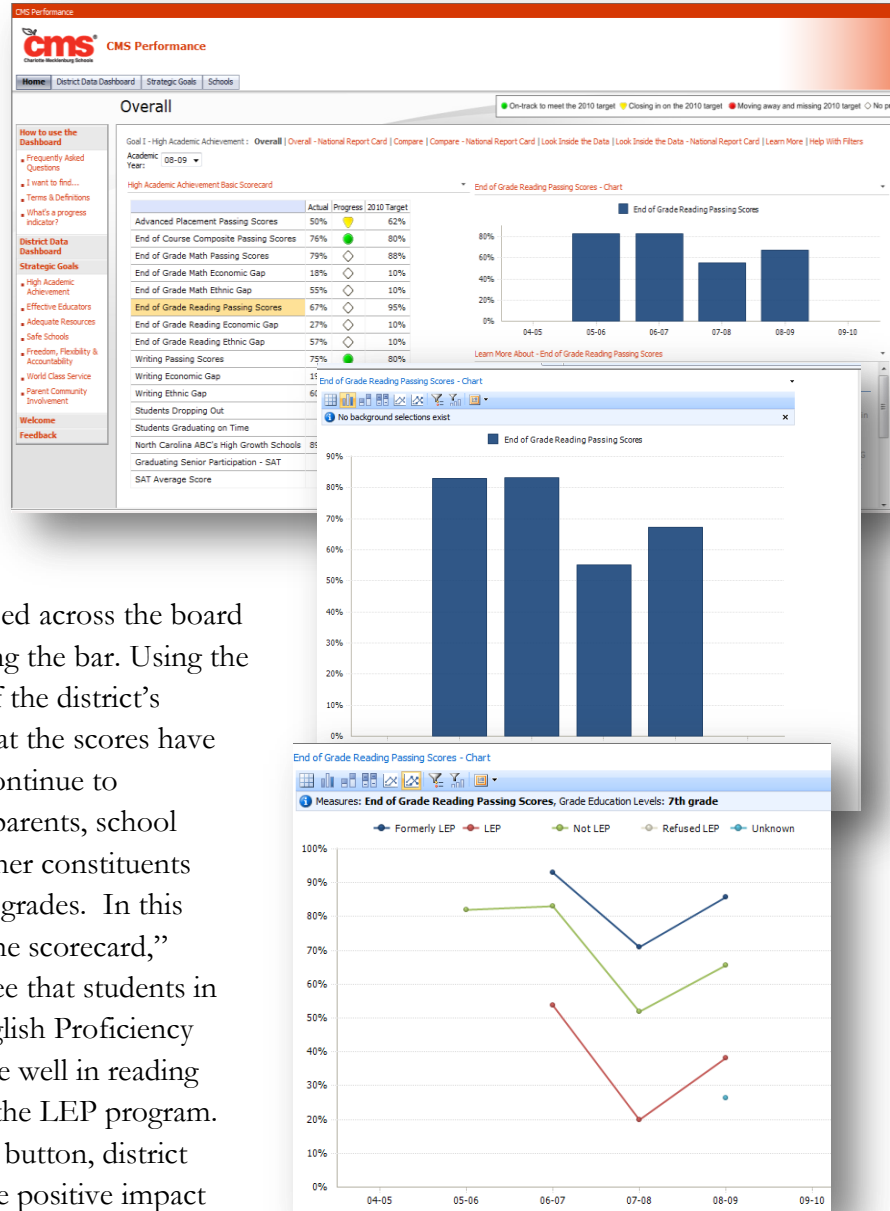
Performance Indicators (KPIs) can be created for each of the strategic goals outlined in a district's strategic plan. With this kind of tool, not only is it easy to see whether the school district is on track to achieve each goal, but the Board of Education and district workers also have the ability to analyze and compare performance data along many dimensions, such as race, income level, and English-language proficiency while preserving student privacy. In this way, the district and Board can make decisions that keep all students on the path to success.

In a nutshell, District Dashboards:

- Help schools and districts attain and maintain excellence in all key areas, especially instruction and learning;
- Promote transparency and alignment with the board, schools and community;
- Provide a quick glance at whether current improvement efforts are on track; and
- Serve as a planning and accountability tools for district and school staff.



For example, at Charlotte Mecklenburg Schools, they share information about the district through their online District Dashboard (see screen shots below). They have translated their strategic plan into a district-wide dashboard that enables everyone to monitor the district's progress. As part of their improvement efforts, they changed the reading tests in the 2007-2008 school year and made them more rigorous. As a result, the scores dropped across the board as the first step in raising the bar. Using the public dashboard, all of the district's stakeholders can see that the scores have since rebounded and continue to improve. In addition, parents, school board members and other constituents can further analyze the grades. In this case, by "drilling into the scorecard," stakeholders can also see that students in the CMS's Limited English Proficiency (LEP) program do quite well in reading tests, after completing the LEP program. In just a few clicks of a button, district stakeholders can see the positive impact the LEP is having on foreign students.



Charlotte-Mecklenburg Schools has chosen to share their district data dashboard so that everyone invested in the district can understand how well the district is doing in achieving their strategic goals.

Keys to Building Effective Dashboards

The first step in developing a dashboard is to select the right type of dashboard for your purpose. Many people think that performance dashboards are operational in nature and always deliver real-time information. This is not true. There is a wide spectrum of performance dashboards: operational, tactical or strategic. The table below summarizes the types of dashboards.

	OPERATIONAL	TACTICAL	STRATEGIC
Purpose	Monitor instructional performance	Measure Progress	Executive Strategy
Users	Supervisors, specialists	Managers, analysts	Executives, managers, staff
Scope	Operational	Departmental	Enterprise
Information	Detailed	Detailed/Summary	Detailed/Summary
Updates	Real-time or intraday	Daily/Weekly	Monthly/Quarterly
Emphasis	Monitoring	Analysis	Management
Graphic Interface	Dashboard	Portal	Scorecard

Operational dashboards track core operational processes using real-time or “right-time” data and emphasize monitoring more than analysis or management. **Tactical dashboards** track departmental processes and projects and emphasize analysis more than monitoring or management. **Strategic dashboards** monitor the execution of strategic objectives and emphasize management more than monitoring or analysis. Strategic dashboards are often implemented using the balanced scorecard methodology and referred to loosely as “scorecards.”

An organization can and should have multiple versions of each type of performance dashboard, but it shouldn’t try to make one performance dashboard support the functionality contained in all three types, since each type requires slightly different technical architecture and application functionality.

It’s important to remember that just as the dashboard on your car follows basic principals so that you can understand how well your car is running and adjust accordingly for changes in weather or traffic volume, District Data Dashboards must follow the same basic approaches to be effective. These guidelines include:

- Choose metrics and information that a user can act on.
- Draw attention to the information that is most urgent.
- Progressively reveal data as the user expresses interest (also known as “drill down”).
- Provide different views for different audiences or perspectives.

Once you have determined what type of dashboards you want to use, you can begin to identify which metrics and KPIs you want to use to build your operational, tactical or strategic dashboard.

Metrics and Key Performance Indicators

A metric measures activity, while a key performance indicator (KPI) measures performance against predefined targets and goals. Effective KPIs:

Are aligned with strategic objectives. Even if the KPIs are part of an operational or tactical dashboard, they should still support the overall strategy of the organization.

Are easy to understand. The purpose of KPIs is to translate strategic objectives into measures that administrators and educators can influence through their actions. To do this, just a few, simple to understand KPIs are best.

Foretell future performance. The best KPIs foretell future performance while there is still time for educators, administrators and district leaders to take action to affect the outcome. These types of KPIs are known as leading indicators, as opposed to the lagging indicators that populate the majority of reports and performance dashboards today (sometimes referred to as “autopsy data”).

Reinforce each other. KPIs can’t be designed in isolation, or they may undermine each other. For example, cutting back bus routes to meet budget goals may increase absentee and tardy rates.

Metrics measure activity. collections of KPIs, baseline data, targets and indicators.

Key Performance Indicators measure performance within a specific context.

Getting Started – Establishing the Dashboard Initiative

It is very important to link the board of education’s governance elements to the superintendent’s strategic plan. Governance policies and elements set by the Board of Education define the “what” for the district. With tools like a strategic plan, superintendents define and set the “how” for the district and lay the groundwork for the dashboard.

There are several steps to start a successful District Dashboard initiative:

- Define the main objective of dashboard
- Identify areas of focus for measurement
- Establish high-level requirements of dashboard
 - Which measures including baselines, targets and results
 - User design emphasis
 - Update frequency
- Define the superintendent’s role

Once you've established the goals of the dashboard, you should consider which functional area within the district will be responsible for supporting its development. You should expect the District Data Dashboard to evolve with your district as you gain more insight. Initially, you may only update the data annually, but as the district learns more about what matters most, the dashboard data may be updated more frequently and the dashboard structure itself may continue to be honed as the stakeholders gain greater transparency and accountability.

The following table is a typical breakout of which school district departments and the leaders for specific parts of the district dashboard development.

AREA	LEAD	TASK	OBJECTIVE
Project Management	Accountability	Develop project infrastructure, processes and controls	Ensure project deliverables remain on schedule and within budget and are properly integrated with other initiatives
Goals, Measures, Process Definition and Alignment	Curriculum & Instruction	Develop balanced scorecards for teachers and principals	Ensure data is relevant and aligned with district goals
Systems and Applications	Technology Director	Develop technology infrastructure to support school-level data needs; backend training	Ensure data is timely and accurate, and easily accessible
Communications	Communications Officer	Develop initiative branding and messaging; adoption plan	Ensure consistent understanding of performance management throughout the district
Training	Professional Development	Develop data inquiry teams in all schools; train school-level employees on new data tools	Build Capacity to use data to drive decision making at the school level to increase student achievement

In addition, your district administrators need to assign who will be responsible for:

- Setting targets
- Managing the content
- Evaluating the data
- Teaching the dashboard to staff and stakeholders

Typically, your superintendent and the board set the strategic 3-5 year targets and department heads set the interim targets for each key performance indicator. In addition, someone in the district is deemed “metrics administrator” and is responsible for entering target information into the dashboard system.

Once the dashboard initiative is underway, it is extremely important to clearly communicate the dashboard and progress to the district stakeholders by:

- Providing a concise summary of district performance, including baseline data, targets and results;
- Presenting data clearly and in an easily understood manner;
- Communicating the Board of Education's priorities to the community; and
- Conveying regularly updated information based on local, state and federal standards.

Behind the Dashboard

What’s behind the dashboard is as important as what the users see. Many organizations, both in education and in private enterprises, try to develop dashboards by manually gathering data and presenting the information in what looks like a series of scorecards. From the outside, it may appear exactly like a dashboard, but it is not. In most cases, the manually collated data is filled with errors, out-of-date and not malleable for meaningful analyses. In essence, they are simply spreadsheets with a pretty face that someone has automated using a dashboard tool. Often called “quickie” dashboards, the vendors selling these dashboard tools usually tout how quickly customers can deploy them. While time to deploy is important, quickie dashboards usually don’t address long-term requirements that provide lasting value to an organization.

A successful performance dashboard needs to align with an organization’s business architecture and run on a robust BI (Business Intelligence) analytic environment and data integration platform that supports multiple methods of accessing and delivering information residing in multiple, heterogeneous systems. Of course, there are exceptions to this rule. Some strategic dashboards (such as balanced scorecards) don’t require much data, and the data they do require—at least initially—doesn’t exist in any automated system and must be manually tabulated and loaded.

As you begin to develop your dashboard or enhance the dashboard you already have, be sure that the investments you make suit your short-term and long-term goals, allowing your organization and the information infrastructure supporting it, to evolve over time.

Managing KPIs

Identifying and managing KPIs are crucial to a successful dashboard. To get the optimal impact from KPIs once they are designed, organizations need to:

Assign ownership. Every KPI needs an individual— not a group—to own it and be held accountable for its outcomes. This person may represent a group of people working to influence the metric, but in the end, it's best if an individual's name is associated with each KPI.

Empower workers. The organization needs to assign individuals (not groups) to be accountable for each KPI on a performance dashboard.

Vet KPIs before attaching incentives. Most organizations rush to attach bonuses or other compensation to KPIs, and the results can be catastrophic. Before linking KPIs to pay, the organization must make sure each KPI is fair and balanced and has the support of the majority of workers whose pay will be affected by its outcomes.

Revise KPIs periodically. KPIs are not perfect when deployed; they need to be tweaked as workers and executives discover nuances about the data, the process, or the calculation they hadn't anticipated. In addition, the half-life of KPIs is short. Over time, KPIs lose their ability to change behavior, so they need to be refreshed periodically.

Conclusion

District Data Dashboards improve planning and budgeting, student achievement, professional development, facilities management and overall operations. Districts can use dashboards to bring their strategic goals into focus, communicating them to all of the stakeholders including students, parents, teachers, administrators, school boards and the community at large. By bringing critical data to the right people at the right time in a format that is easy to use, decisions are made that positively affect the entire district and quality of education for every student.

If you are interested in learning how to bring district dashboards to your district, contact our Director of Education Partnerships, Libby Preble at libby.preble@mariner-usa or 704.904.0402.

About the Author



David "Fitz" Fitzgerald, Mariner Education Group Manager

David Fitzgerald has more than 25 years of experience in performance management, business intelligence and productivity improvements for organizations in the healthcare, education, manufacturing and financial services industries. Currently, he leads performance management projects with Mariner's customers in the education sector. Fitz earned both an MBA in marketing and BA in information systems, enabling him to understand business issues, operational challenges and technology solutions. Fitz also earned his Project Management Professional certification from the Project Management Institute, adding to his experience in running projects smoothly and within time and budget constraints.