MAKING DATA MEAN SOMETHING

A data-informed culture uses assessments to create milestones toward a shared educational goal

By Vernita Glenn-White, Kristopher J. Childs, and Damien Moses

Teachers at Edward W. Bok Academy, a middle school in Lake Wales, Florida, manage to consistently score 90 percent and above on end-of-year summative exams. Bok Academy's principal spearheaded the achievement by developing a data-informed school culture; letting teachers implement an effective, summative assessment process; and celebrating success at all levels.

But it took a plan to meet those goals. Principal Damien Moses asked his leadership team and teachers four questions based on the "Four Pillars" (mission, vision, values, and goals) outlined in the book *Learning by Doing: A Handbook for Professional Learning Communities at Work*: (1) Why do we exist? (2) What do we hope to become? (3) How must we behave? and (4) Which steps must we take and by when?

As he presented the questions, Moses prompted his leadership team and teachers to think about the relationship between data and each of the Four Pillars. Instead of thinking that reaching a certain number or percentage indicates success, the teachers needed to consider what success meant to them and determine whether that concept aligned with the four pillars or added to the school culture. Moses, in effect, asked his teachers to look beyond the scores before beginning data collection. Percentiles needed to have meaning, and everyone—teachers, students, and parents—needed to embrace the new paradigm.

Toward a Data-Informed Culture

Many principals today find themselves in the same situation: There's plenty of data to tap, but what it will be used for is unclear. Once you determine that data must have meaning, an approach such as Mathematica Policy Research's 2014 Conceptual Framework for Data-Driven Decision-Making can help get teachers and other stakeholders on board. It suggests the following steps:

Assemble high-quality raw data. A principal should think about how their school currently uses data. Depending on the goal, data can be collected through a series of formative, diagnostic, and summative assessments; student assessments; and observations or surveys of staff, students, parents, and

community members. The Four Pillars will determine which data source(s) to use as a foundation toward reaching specific data goals put in place by teachers.

Conduct analysis to ensure resulting data is relevant. If the purpose is to use data to increase student achievement or outcomes, the data selected should be valuable and relevant to all decision-makers. While the principal should have an overarching goal, teachers and students must be involved in contributing data sources to meet milestones toward that goal.

For example, a principal might want to increase standardized test scores in mathematics and science over a semester. Teachers can incorporate biweekly classroom summative assessments as milestones and use weekly qualitative interviews such as data chats with students to create action steps. The teachers get to implement something they created as a team, and the students help in developing plans for improvement.

Use relevant and diagnostic data to inform instructional and operational decisions. The most detailed data charts won't improve teacher quality or increase student achievement if they remain in isolation. Once the relevant data sources have been identified, principals should monitor progress in data use by checking how often teachers and students interact with the information.

Visit team- or grade-level planning meetings to hear how teachers use milestone data results to create new assessments and action steps. Conversations should include specific instructional tasks that are aligned to students, questions to ask students to help them understand the content, and activities that are relevant and content-rich. After the plans are created, principals should revisit classrooms frequently to see these plans in action.

READ MORE

Check out *Learning by Doing: A Handbook for Professional Learning Communities at Work* for more ideas on employing the Four Pillars in your school, and *Eight Steps to Meaningful Grading* for resources on moving from traditional to standards-based grading systems.

Get SMART

Once each team or grade level establishes an assessment and lesson-planning process, principals can attach meaning to grades or percentages using Strategic, Measurable, Attainable, Results-oriented, and Time-bound (SMART) data goals.

For example, the principal might decide to use standardized test scores from two subject areas as a foundation to a new approach to interacting with data (Strategic). The scores can be monitored to provide a reference for what the teams are working toward (Measurable). If students currently score 60 percent on mathematics and science assessments over a semester, a principal can set the goal to 75 percent over the next semester (Attainable). Results are monitored to identify evidence of effectiveness, and principals set and observe a schoolwide deadline (Time-bound).

Each grade level or team can create data-driven milestones pertaining to their students. For example, the principal can set the criteria so that teachers focus on essential standards and self-assess what they want students to learn. Developed prior to instruction, assessments will focus on how teachers know whether students are learning, as well as create systematic interventions if students aren't learning. Finally, principals should ensure that teachers safeguard all results by discussing ways to extend learning if students already know the material.

There are three core beliefs for implementing SMART data goals:

1. **A grade should communicate mastery of learning.** As teachers take ownership of data processes, principals should be clear about homework and grading policies. Guiding questions related to the Four Pillars can be used to frame the teacher's thinking: What is the current grading policy at your school? Does it communicate what the student has learned? Is the focus on the percentage, or is the focus on whether or not the student has mastered the content?
2. **Homework is essential for learning but should not be included in the grade.** Teachers should have the freedom not to measure homework with a grade, but instead shift the mindset to prep work and a "rubric" grading scale. Again, guiding questions and statements can be used to frame the teacher's thought process for identifying a different approach to grading.
3. **Learning might take more than one attempt.** Reteaching is important, but the conversation must be different. Principals must establish clear ideas of what is considered inadequate, below satisfactory, satisfactory, proficient, and mastery, and they should illustrate it with a visual aid. Reteaching should be discussed and built into instructional plans throughout the school.

Tracking the Data

One way to build a schoolwide data culture is by implementing a visual tracking aid to measure success. One example might be a thermometer, using different temperature levels to indicate progress from cold to mild to medium to hot and extra-hot. Students can identify these words and use them to communicate their learning with their parents or guardians.

Principals should have a system in place to monitor the visual aid of choice. Steps to consider:

- Have teachers create and use visual aids.
- Have clear discussions about the targets for students, teachers, and each team or grade level.
- Include students in the process, and teach them what the data means.
- Have a system in place for classroom walkthroughs monitoring use of the visual aid and data tracking.
- Use the visual aid in every classroom on campus.

Celebrate Successes

Celebrate milestones toward your goal; more progress will be made if there are minicelebrations along the way. "An effective celebration program will convince every staff member that he or she can be a winner and that his or her efforts can be noted and appreciated," *Learning by Doing* says. If a goal is not met, it does not mean the plan failed; there were likely steps taken toward it.

Building a data-rich culture might not happen in a single quarter or semester. Effective principals will monitor schoolwide goals, delegate responsibilities, and celebrate milestones along the way. Everyone can achieve more when there is a common goal with meaningful, relevant action steps leading to it.

Data will provide the criteria to determine whether everyone is on the same page; it is not something to be feared, overlooked, or accessed by only one person or department. Data empowers everyone—principal, teachers, students, and parents. P

Vernita Glenn-White is assistant professor of Mathematics Education at Stetson University in DeLand, Florida.

Kristopher J. Childs is National Mathematics Specialist at Houghton Mifflin Harcourt.

Damien Moses is principal of Edward W. Bok Academy in Lake Wales, Florida.