

Do You Know What Your Students Know?

Using formative classroom data to improve student achievement

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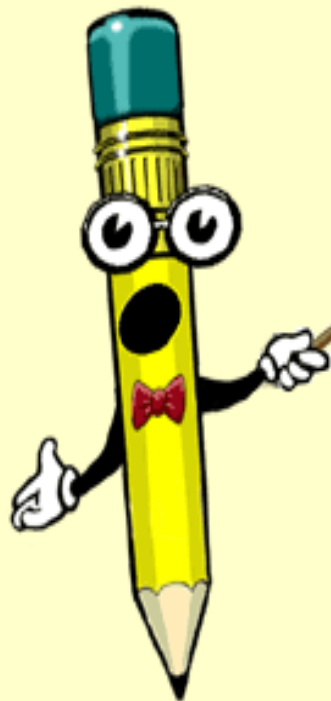
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Using Data to Improve Student Achievement

Principals are increasingly more accountable for the achievement of their students.

What do principals of low performing schools need to put in place to improve their student achievement?



The lessons learned in this presentation were a result of an opportunity to work with 10 Title I schools in a large school district, all of whom were on the “needs improvement” list.

Though we have a good deal of research to draw on in identifying what effective schools and leaders do, translating the research into concrete, practical actions has been more elusive.

How do state standards and NCLB change expectations for what happens in our schools?



Before Standards

**Teachers
taught what
they thought
was
important.**

After Standards

**Teachers are
expected to
teach the
content
standards.**

Before Standards

Teachers had different expectations for different groups of students.

After Standards

Teachers are expected to take all students to proficiency.

State assessments only inform schools where their students are performing at the time of testing.

Teachers must know how their students are performing throughout the school year.

**Why did our Title I
schools think their
performance was low?**

Problem clarification raised questions.

- **Were we teaching the content standards we were testing?**
- **Were the state content standards embedded in our district curriculum?**
- **Did anyone know where our students were on mastering the content standards on a daily or weekly level?**
- **Were we collecting classroom formative data?**

The Surveys of Enacted Curriculum are invaluable tools for answering the first two questions.

By the end of problem clarification,
it was painfully clear that

- Staff were not clear on what students were expected to know and do and what proficient performance looks like.
- Schools and staff didn't know what their students knew and didn't know.

So where did we need to go?

“The combination of three concepts constitutes the foundation for results: meaningful teamwork; clear, measurable goals; and the regular collection and analysis of performance data.”

Mike Schmoker

What data should we collect? Is all data equally useful?

We already had a lot of data. Are these the data we wanted to use?

- Large scale assessment data
- Report card grades
- Attendance
- Quarterly assessments
- District exams

What and how much data did we want teachers to collect?

We decided to start by requiring all teachers to collect student level data on constructed responses at the classroom level on an ongoing basis.

What did we learn?

- Not all data was equally useful.
- Holistic rubric scores did not provide diagnostic information.
- Data discussions focused on rubric scores or letter grades was not sufficient to identify needed interventions.

We still couldn't answer the question

Where are each of our students in relation to the content standards they must attain?

- What do they know and are able to do?
- What do they still need to learn?

So now what?

Our instruction was better aligned with the content standards but we still needed to understand what our students knew and still needed to learn.

Black and Wiliam in their 1998 Phi Delta Kappan article, [“In the Black Box: Raising Standards through Classroom Assessment,”](#) assert,

“There is a body of firm evidence that formative assessment is an essential component of classroom work and that its development can raise standards of achievement. We know of no other way of raising standards for which such a strong prima facie case can be made.”

“At the risk of sounding overly simplistic, the use of student work as the unrelenting focus of adult conversations can be the catalyst of fundamental changes in the educational experience of adolescents, and the transformation of teaching and learning at the high school level.”

---Aspen Report on Reforming High Schools

Lani Seikaly, Hillcrest and Main

So we understood that to know where each of our students is in relation to content standards, we needed to regularly examine student performance to inform our instruction.

What would that look like?

How would we operationalize that?

Rick Stiggins argues

“To assess student achievement accurately, teachers and administrators must understand the achievement targets their students are to master. They cannot assess (let alone teach) achievement that has not been defined”.

Stiggins, Richard J. 2001. “The Principal’s Leadership Role in Assessment.” NASSP Bulletin (January 2001): 13–26.

The Examining Student Work Protocol asks teachers to

- **Identify characteristics of proficiency** on an indicator/objective using a specific assignment/assessment
- **Diagnose student strengths and needs** on the performance
- **Determine next instructional steps** based on the diagnosis

In the first part of the protocol,

a team of teachers reach consensus on what the team believes constitutes a proficient response on a selected text and question.

Teachers were surprised at how “off the page” their teammates were.

Think of all the mixed messages our students are receiving when we haven't defined proficiency on a standard / indicator in the same way.

In the second part of the protocol,

the team examines three student papers to determine if the response is **proficient** and to identify strengths, needs and instructional next steps.

Part 2: Diagnosing Student Strengths and Needs to Inform Instruction

- What did the student demonstrate that they knew?
- What did the student not demonstrate?
- How would you find out if they knew it?
- Based on the team's diagnosis of the student performance, what do you do next with that student?
- What do you need to re-teach the class?

How do we build teacher capacity to do this?

Shouldn't we do that before we start the process?

This is on-the-job training.

The focus of the team is on interpreting student performance. This process enables teachers to examine their own practice through the lens of student needs rather than the lens of good versus mediocre teaching.

What did we learn?

- Teachers were invested in the process and in making changes to their practice.
- Teachers began to reach consensus on what they were looking for in an assignment before they gave it to the students.

What did we learn?

When we spent less time sorting student performance by rubric scores or letter grades and more time diagnosing their performance, we got better, more useful data to inform our instruction.

What did teachers say?

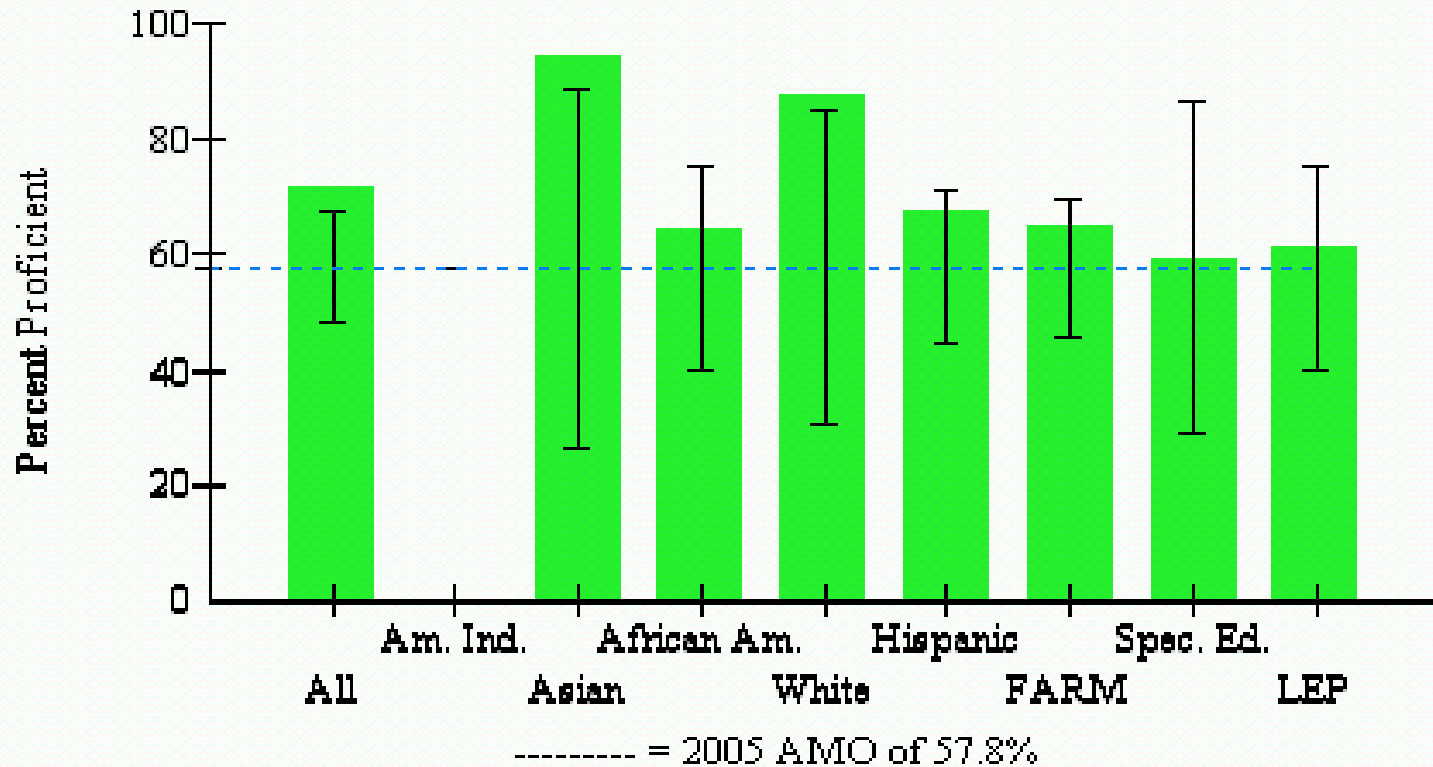
“I wish I had caught onto this earlier but at one of the meetings, it became apparent that kids weren’t reading the question. That was a big awakening to me because I was so focused on how to write the answer, we hadn’t spent time unpacking the question.”

What did teachers say?

“My teammates proficient responses were a little bit more advanced than what I was expecting and looking for. They were looking for a lot more in-depth answers. To get on the same page, I needed to raise the bar for my students.”

What did we learn?

2005 AYP Reading: Grades 3, 4 and 5



The process of examining student work weekly and using the data to inform our instruction had some great by-products:

- A clear focus on student achievement
- Ongoing, job-embedded professional development
- Deeper understanding of content standards they were teaching
- Clarity of the targets for teaching and assessing

The process of examining student work weekly and using the data to inform our instruction had some great by-products:

- A model of collaborative inquiry and positive culture
- Diagnostic data to inform instruction that can supplant snapshot and benchmark data
- Data discussions that focus on specific student needs rather than generic needs

You can find more information on the School Improvement in Maryland Web (mdk12.org).

- **The Examining Student Work Protocol**
(<http://mdk12.org/data/progress/using/m4w5/pr4/index.html>)
- **An online course, Using Data to Improve Student Achievement**
(<http://mdk12.org/data/course>)
- **Monitoring Templates**
(<http://mdk12.org/data/progress/developing/m4w2/pr2/index.html>)

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Using Student Work to Inform Instruction Protocol for a Team Discussion

This protocol to discuss student work was created to help grade level teams reflect on their definitions of proficient work on specified assignments or assessments and to reach consensus on what constitutes a proficient response as well as to diagnose the student performance in relation to proficiency to inform instruction. Each teacher will be asked to bring three samples of student work from the same assignment or assessment: a response at the top of the class, a response at the bottom of the class and a response in the middle of the class.

Part 1: Reaching Consensus about Proficiency

What do you want your students to know and be able to do?

In the first part the facilitator will ask the following questions to assist the team in reflecting on their prior decisions about the assignment or assessment and in reaching consensus on what constitutes a proficient response.

- What did you ask the students to do?
- Which Maryland Content Standard indicator and objective were you assessing?
- What did you consider proficient performance on this assignment?
- Exactly what did students need to say or write for you to consider their work proficient?
- Did you assign scores to the work? If so, how did you distinguish between scores?

Part 2: Diagnosing Student Strengths and Needs to Inform Instruction

After reaching consensus, each teacher will read his/her three sample student responses, and the team will diagnose strengths and needs and identify next instructional steps. The team will be examining what the response demonstrates the student knows and can do and what the student has not demonstrated he knows and can do. The team will be discussing where the teacher should take the student next instructionally. They will be answering that question for three groups of students: high, low and middle performance students on that assignment. The middle student will provide information about what the teacher needs to do instructionally for the class. The bottom student will provide information for what you need to do for that student. And the top student performance will drive the discussion about how to extend/enhance instruction. The team will be answering the following questions:

Where are my students? What evidence do I have to know that?

- What did the student demonstrate that they knew?
- What misconceptions or wrong information did the student have?
- What did the student not demonstrate?
- How would you find out if they knew it?
- With hindsight, did the assignment give students a good opportunity to demonstrate what they knew?

What do you do if they do not know it?

What do you do if they already know it?

What do educational experts say about examining classroom work to inform instruction?

The process of examining student work to diagnose strengths and needs and then to use the information to make instructional decisions is supported by a number of research studies and national experts in educational leadership, formative assessments and the collaborative examination of student work.

Black and William in their 1998 Phi Delta Kappan article, "[In the Black Box: Raising Standards through Classroom Assessment](#)," describe the research that documents the strong link between improved student achievement and the use of formative data. They assert,

"There is a body of firm evidence that formative assessment is an essential component of classroom work and that its development can raise standards of achievement. We know of no other way of raising standards for which such a strong prima facie case can be made."

Thomas Guskey argues that the assessments most likely to improve student achievement are those that teachers create. You can read online his February 2003 *Educational Leadership* article entitled, [How Classroom Assessments Improve Learning](#).

Niyogi promotes the use of assessment to better understand what students know:

"Assessment should be used not simply to judge how much kids know but to illuminate the nature of their knowledge and understandings in order to help kids learn.... Common sense tells us that on-going, classroom-based assessment can serve this purpose. Teachers interacting with students will observe the nuances of their cognitive growth and development over time, their individual strengths and weaknesses in ways that would be extremely difficult, if not impossible, to capture through standardized or conventional testing alone." *Niyogi, Nivedita. 1995. The Intersection of Instruction and Assessment: The Classroom. Princeton, NJ: ETS.*

Stiggins argues that we really can't assess accurately if we don't understand the target:

"To assess student achievement accurately, teachers and administrators must understand the achievement targets their students are to master. They cannot assess (let alone teach) achievement that has not been defined". *Stiggins, Richard J. 2001. "The Principal's Leadership Role in Assessment." NASSP Bulletin (January 2001): 13-26.*

Joan Richardson, expert on professional development and editor of the NSDC **Results** newsletter, believes that

"The practice of having teachers work together to study student work is one of the most promising professional development strategies in recent years. Examining student work helps teachers intimately understand how state and local standards apply to their teaching practice and to student work. Teachers are able to think more deeply about their teaching and what students are learning. As they see what students produce in response to their assignments, they can see the successes as well as the situations where there are gaps. In exploring those gaps, they can improve their practice in order to reach all students."

Rick DuFour identified a number of staff development needs for teachers to collect and discuss the data that would focus them on what students were learning. In his article, "[The Learning-Centered Principal](#)," he describes his role in the following way:

"As principal, I played an important role in initiating, facilitating, and sustaining the process of shifting our collective focus from teaching to learning. To make collaborative teams the primary engine of our school improvement efforts, teachers needed time to collaborate. Teachers, accustomed to working in isolation, needed focus and parameters as they transitioned to working in teams. They needed a process to follow and guiding questions to pursue. They needed training, resources, and support to overcome difficulties they encountered while developing common outcomes, writing common assessments, and analyzing student achievement data."