Part 1

Instruction

Chapter 1

Data-Driven Instruction

Peer-to-Peer: Thirty Minutes That Tell It All

One of the most remarkable places to observe at Truesdell Education Campus in Washington, DC, is not just the classroom but the conference room. At 11:15 on a Monday morning, the third-grade team has gathered during their prep period around the conference table, accompanied by principal Mary Ann Green Stinson. The walls are not covered with beautiful pictures but rather by multiple charts from previous meetings. You see charts describing what students need to know and do around fractions as well as how to write an effective argument after reading a passage. That is where the teachers' attention is now.

As one teacher is charting, the others are scanning the chart to identify the biggest gap in student learning. One by one, the teachers speak up, unassuming but confident. "I think they could benefit from more work on sentence expansion," says one teacher, Ms. Mack. "They're expressing ideas, but they're not extending them by using 'because.'"

Another teacher nods. "You can see in the second example, there's kind of a big run-on because they're not using the sentence expansion correctly," she says. "And also, the selection of evidence here is not necessarily text-dependent."

Mary Ann nods. "So thinking about some of those misconceptions, what do you think the one key misconception is that we should focus on for the reteach?" A third teacher, Ms. Isaac, speaks

up. "I think, looking big-picture, it's twofold," she says. "Selection of text-dependent evidence, and then expanding that, explaining."

"Okay," Mary Ann agrees. From there, the group goes on to plan their reteach, developing a concrete action plan to address what their students still need the most support to learn.

WATCH Clip 2: Stinson—See It, Name It (Gap)—Weekly Data Meeting

In 2010, Mary Ann Green Stinson was seeking a job as a principal in Washington, DC. She'd been inspired by her work in the classroom and as an assistant principal in Richmond, Virginia, and she was eager to be in a position where she could impact more children's lives. The only trouble was, the chancellor of DC Public Schools wasn't sure where to place Mary Ann.

"Just give me your toughest school," Mary Ann told the chancellor. Somewhat reluctantly, the chancellor agreed.

That's how Mary Ann began her career at Truesdell Education Campus. As she walked through the school prior to starting, she understood all too well why her supervisor had hesitated to place a first-year principal at this site. The conditions were, as she puts it now, "chaotic," making her concerned not only for students' education but also for their safety. Academics were suffering so deeply that 80 percent of students were reading below grade level, and some students were expressing their frustrations at school violently. Mary Ann came away from those early visits with a nonnegotiable mission: "to guarantee Truesdell was a safe place to teach and learn."

So Mary Ann dove into her new leadership role with two sharply pointed areas of focus: student culture and student learning. You'll read more about student culture in Chapter 5; for learning, Mary Ann asked herself two basic questions:

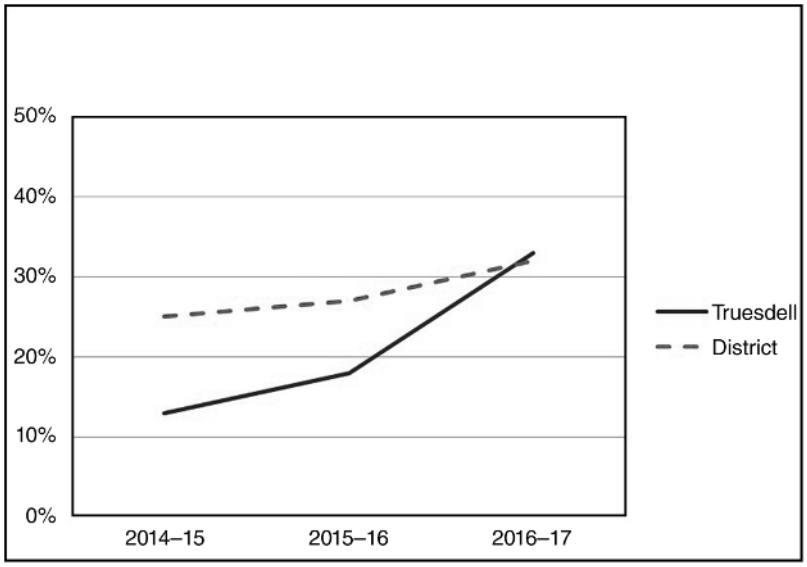
- How do we know whether students are learning?
- And when they're not, what do we do?

"We had to fix instruction," recalls Mary Ann. "With so many students falling behind, that was a tier 1 move." That meant that even with so many different demands on Mary Ann's time and energy to improve student culture, she also had to ensure that she was focusing on learning: "I had to transition from being a disciplinarian to being

an instructional leader." That act of tuning into learning can be called data-driven instruction.

Over the course of the next few years, the impact of Mary Ann's work was stunning. Right away, she and her colleagues began seeing children move, slowly but surely, from below grade level to almost on grade level to unquestionably on target. Today, more Truesdell students than ever before are reading on grade level—and those numbers are still climbing (see Figure 1.1).

Figure 1.1 Washington, DC, Assessment: Truesdell Education Campus, Percentage at or Above Proficiency



In just a few short years, Mary Ann completely altered the learning environment—and outcomes—of her school. But Mary Ann didn't get results like these by changing her students' economic situations (the vast majority of them are economically disadvantaged) or their racial backgrounds (96 percent are black or Latino).[1] She did it by embracing data-driven instruction.

Data is an increasingly contentious word in some educational circles. But true data-driven instruction isn't about limiting the content we teach or about reducing our students to numbers. To the contrary, data-driven instruction is about knowing precisely what our students need, and meeting them there every step of the way.

It's about shifting our daily focus from "Did we teach it?" to the much more pertinent "Did they learn it?"

Core Idea

Effective instruction isn't about whether we taught it.
It's about whether students learned it.

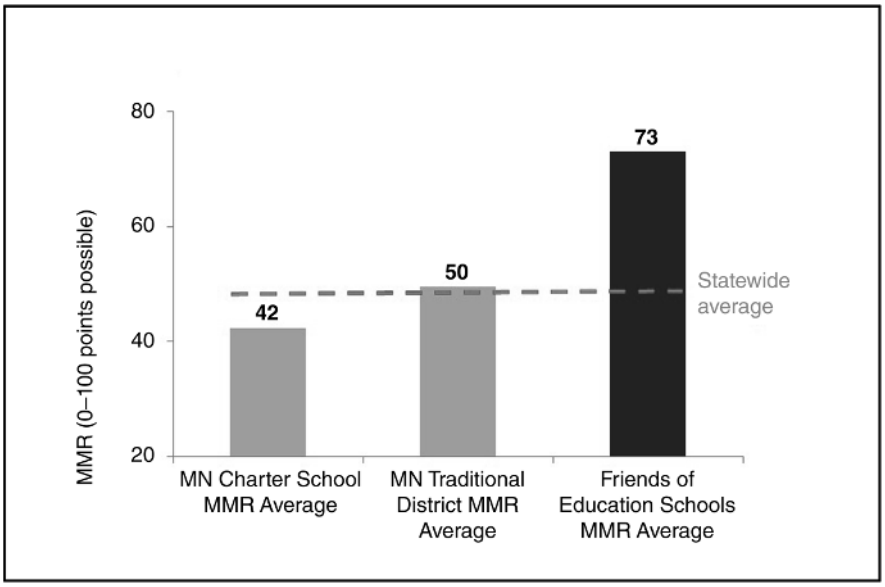
Implementing this simple principle fundamentally transforms schools. More important, it transforms *all* types of schools, from district schools to turnaround schools to charter schools, forging success stories all across the globe.

Over the past fifteen years, I have observed a vast variety of leaders worldwide who have implemented data-driven instruction effectively to get results. Leaders from Louisiana to Nevada and from Chile to South Africa have achieved results like the ones shown here.

Data-Driven Instruction in Action

Results from Across the Nation

Minnesota Achievement Results: Friends of Education Schools, Multiple Measurements Rating (MMR)



Louisiana and Nevada State Test Results: Jefferson Parish and Clark County, Percentage at or Above Proficiency

	Math			Reading			Gains	
School	**Year 1**	**Year 2**	**Year 3**	**Year 1**	**Year 2**	**Year 3**	**Math**	**Reading**
Jefferson Parish (LA)								
Gretna Park	36	51	67	47	41	62	+31	+15
Washington	56	59	72	37	78	74	+16	+37
Clark County (NV)								
Carson	62	69	76	45	66	76	+14	+21
Elizondo	44	62	75	38	53	60	+31	+22
Hancock	58	79	86	49	70	83	+30	+34

Oklahoma, Utah, Colorado, New Mexico, and Louisiana Results: Proficiency Gains Compared to State Gains, 2013–2016

	Gains	
School	**Math**	**Reading**
Westwood Elementary (Caddo Parish, LA)	+24	+31
Fair Park High School (Caddo Parish, LA)	+16	+26
Anadarko High School (Anadarko, OK)	+40	+0
Lincoln Elementary (Ogden, UT)	+27	+20
Manaugh Elementary (Cortez, CO)	+23	+16
Apache Elementary (Farmington, NM)	+37	+34
David Skeet Elementary (Gallup, NM)	+30	+31
Crownpoint Elementary (Gallup, NM)	+25	+30

In listening to these leaders' stories and observing their implementation, I am even more convinced than ever that data-driven instruction is the single most effective use of a school leader's time.[2] The thirty-minute weekly data meetings that Mary Ann has implemented are the highest-leverage, most game-changing thirty-minute conversations possible—conversations that lead to results.

If we teach but students don't learn, is it really teaching? Leaders like Mary Ann don't take that risk. As Mary Ann put it herself, they *guarantee* learning in their schools. To that end, throughout the year, they make sure they know when teaching in their schools is working. And when it isn't, they fix it.

Core Idea

The most effective teachers and leaders know when teaching is working. And when it isn't, they fix it.

In this chapter, we'll take a closer look at the work of leaders like Mary Ann to determine exactly what powerful actions make this possible. You'll see that they fall into three phases of an ongoing cycle of teaching and learning:

1. **Assess:** set the road map for rigor
2. **Analyze:** identify the gaps in student understanding
3. **Act:** reteach key content to get students on track

The pages that follow will cover all of these in depth, as well as the systems you'll need in place to roll them all out. Without further ado, let's dive in.

ASSESSMENT: WHAT WILL STUDENTS LEARN?

We tend to think of assessment as the endpoint of learning, but in reality, it's where learning begins. Here's why.

Where Is the Bar for Rigor? Beginning from the Endpoint

Imagine a group of sixth-grade math teachers who are all charged with teaching their students the following standard:

Sixth-Grade Math Standard

Ratio and Rate Reasoning

- Use ratio and rate reasoning to solve real-world and mathematical problems.
  - Use ratio reasoning to convert measurement units.
  - Manipulate and transform units appropriately when multiplying or dividing quantities.

—CCSS.Math.Content.6RPA.3.D

These sixth-grade teachers are each given a curriculum and a math textbook that is aligned to this standard, and they go out to teach their students. At the end of the week, each one creates his or her own one-question assessment/Exit Ticket to see whether students have mastered the standard. As you look at their assessments here, consider this question: How does what students have to know and be able to do change from one of these assessment items to the next?

The Power of Assessment

Sixth-Grade Math Assessment Questions

1. Joe can mow a lawn in 2 hours. At this rate, how long will it take him to mow three lawns?
2. Joe can mow three lawns in 4 hours. At this rate, how long will it take him to mow one lawn?
3. If it Joe mows four lawns in 7 hours, then at that rate, how many lawns can he mow in 35 hours? At what rate were the lawns being mowed?
4. If it took 2 hours to mow three lawns, how much can be mowed in 20 minutes at that rate?
5. Joe has two 7-foot-long boards. He needs to cut pieces that are 15 inches long from the boards. What is the greatest number of 15-inch pieces he can cut from the two boards?

Stop and Jot

How does what students have to know and be able to do change from one of these assessment items to the next?

If you take a moment to solve each of these problems, you will quickly notice how different they are. Generally, each question ratchets up the rigor from the question before it. Whereas question 1 is a simple ratio, question 2 requires division of hours into minutes: ¾ into 45 minutes. Question 3 requires all of those skills as well as setting up the proper proportion. Question 4 adds on the conversion of units (hours to minutes) right at the beginning, and question 5 is in an entirely different orbit. Not only do you have to convert units (feet to inches), but you have to deal with remainders: if you cut the 7-foot board, you will have five pieces and 9 inches to spare. If you are not careful, you might think you can add the two 9-inch pieces together to form an additional 15-inch piece. Yet the answer is ten pieces, not eleven.

Now consider what would happen if these five teachers met to talk about their students' success on this standard. Teacher 1 might say that 90 percent of her students have mastered the standard, and Teacher 5 might respond, "Wow, that's amazing: only 40 percent of my students have mastered it." Even when they are using the same curriculum, the same textbook, and the same standard, they wouldn't be talking in the same language!

Why is this so important? Because it drives home a critical point about instruction: standards are meaningless until you determine how to assess them.

Core Idea

Standards are meaningless until you determine how to assess them.

The best-worded standard and most sophisticated curriculum don't tell you what students need to do; the question you ask them does. The assessment, then, sets the bar for rigor.[3]

This core principle has game-changing impact on how we think about instruction. Traditionally, we have told teachers to backwards-plan from standards. Plan out your lessons to help students master the standard; and after teaching, plan an assessment that you will use to measure it. This thinking process, however, is backwards. What this leads teachers to do is to design an assessment that matches how they taught, which may or may not guarantee the rigor as question 5 does. Essentially, we are allowing each teacher to define his or her own bar for rigor, which means every classroom will learn content at highly varying degrees of difficulty.

Now contemplate the reverse. Imagine if *before* you start planning the teaching, you design the end assessment. Then you ask yourself, "How do I have to teach this for my students to be able to master this level of assessment?" You have changed the order of instruction: you make assessment the starting point, not the end.

Core Idea

Assessments are the starting point for instruction, not the end.

Mary Ann's teachers understand this idea, and it changes the way they plan and execute their teaching. They work backwards from assessments that demand the level of rigor they need their students to be capable of achieving, and they plan what to teach from there. With assessment as their starting point, they travel a much more direct journey to get to the proper destination.

A Word on . . . Rigor, Multiple Choice, and Open-Ended Responses

One of the most common criticisms against data-driven analysis is that it reduces learning to "rote level" or "basic" skills, preventing students from engaging in "real" learning. Underneath that critique is a belief that the *type* of question matters more than the content. By this reasoning, some assessment types, such as multiple-choice questions, are inherently "unrigorous" and lacking in any value. Let's evaluate that claim by taking a look at the following question about Shakespeare's *Macbeth*:

Directions: In this scene, Macbeth is discussing a prophecy he received from the witches. Read the passage, then answer the questions that follow:

> **Macbeth:**
> They hailed him [Banquo] father to a line of kings
> Upon my head they placed a fruitless crown,
> And put a barren sceptre in my gripe,
> Thence to be wrench'd with an unlineal hand,
> No son of mine succeeding. If 't be so,
> For Banquo's issue have I filed my mind;
> For them the gracious Duncan have I murder'd

1. The description of Macbeth's "barren sceptre" contributes to the unity of the passage in which of the following ways?
   A. As a parallel between Macbeth's possible children and Banquo's possible children.

B. As a satirical comment on challenges Macbeth will face with infertility.

C. As a comparison between Macbeth's strong formal authority and his lack of popular influence.

D. As an ironic contrast between Macbeth's power and his inability to produce future kings.

Consider the skills required to answer this question correctly: students would need to be able to combine an understanding of vocabulary in context with the larger connotative and figurative meanings of the phrases. Even if students correctly identify the meaning of "barren sceptre," they may still select option B, unless they can discern that this phrase is not a work of satire, which leads to the correct answer of D. If a rigorous understanding of English is the goal, it's hard to imagine a better way to assess for it. And this is the sort of question that appears on Advanced Placement exams.

Now consider an alternative option: having students write an essay or short answer to the following prompt:

- Analyze the following passage of Shakespeare. How does it contribute to one of the central themes of Macbeth?

Without doubt, this is a quality prompt that could be used to assess students' analytical abilities. They have to generate their own argument and support it with evidence from the text.

In the end, both the multiple choice *and* open-ended questions add value, and they complement each other in very important ways. One (open-ended) requires you to generate your own thesis, and the other (multiple choice) asks you to choose between viable theses—with one being the best option. In today's world, we need both of those skills: the ability to discern between close options and to generate our own arguments. We also need them pragmatically: all our lives we will be asked to perform on multiple-choice assessments (SAT, LSAT, GMAT, USMLE, firefighter's exam, and so on) as well as with essays (college "blue book" exams, the Bar, written presentations, and the like). Anyone who claims that only multiple choice or only essays can exercise both abilities would be missing out on the opportunity to develop a child's intellect fully.

The key, then, is to make sure that our assessments include multiple types of questions, and that each of those questions is rigorous. For multiple-choice questions, the options and text difficulty determine the rigor.[4] For open-ended questions, it's not the prompt but the rubric that determines the rigor. Keep those principles in mind, and you can create effective, balanced assessments that prepare children to demonstrate mastery now and in the future.

Designing effective assessments doesn't just work at the elementary school level; it applies to all grades. The question is: How do you design assessments that meet the right level of rigor?

Where Is the Starting Line? Keys to Effective Assessments

Almost all schools strive to offer instructional "rigor." Authors from Dagget to DuFuor have offered definitions of rigor.[5] Barbara L. Blackburn has defined it as "creating an environment in which each student is expected to learn at high levels, and each is supported so he or she can learn at high levels, and each student demonstrates learning at high levels."[6] And as Del Stover underscored in a 2015 article for the *American School Board Journal,* creating the right assessments to give students the opportunity to demonstrate that high level of learning is an indispensable step to creating a rigorous environment.[7] But all of this just goes to raise the question: What does a rigorous assessment actually look like?

At Truesdell, and at schools that achieve similar results, leaders and teachers use the following criteria to design their assessments.

Common

If assessments define rigor, then they must be common across all classes and grade levels if we want to guarantee equal rigor in each classroom. "Common assessments are a nonnegotiable," Mary Ann notes. Without common assessments, we will have some teachers who push their students to the highest levels of learning and others who don't. This is not just true for elementary schools; it applies at every level. Mike Mann is the principal of the North Star Washington Park High School, one of the highest-achieving urban high schools in the country (more on him in Chapter 2, on planning).[8] Mike explains, "Measuring outcomes is only useful if you know what the target should be. If the target is different in each classroom, then we have no way to know how students are doing across the cohort relatively to each other. The students are stuck with varying degrees of rigor depending on which teacher they have. That's not fair to our students."

Transparent

If standards are meaningless until we define how to assess them, then teachers and leaders need to see an assessment *before* teaching in order to be able to teach to that degree of rigor. This flies in the face of conventional educational wisdom. Yet to conceal assessments from educators is something akin to asking a group of hikers to climb a mountain without telling them which peak they need to scale. Teachers need to see the destination to be able to navigate the route.

Core Idea

Concealing assessments is akin to asking a group of hikers to climb a mountain without telling them which peak they need to scale.
Teachers need to see the destination to be able to navigate the route.

Interim

Great schools like Blanton Elementary schedule *interim* assessments to identify problems *while change is still possible.* Many educators have referred to year-end assessment analysis as equivalent to performing an autopsy. If you had a sick child, what would you do? You would seek medical help. No one would recommend waiting—you would be held liable for that child's future! Yet schools do just that with student achievement. Rather than identifying what's making a child's learning "sick" during the school year and finding the right medicine to attack the disease (that is, make it possible to learn more effectively), schools wait to analyze year-end assessment results after some of the students have already failed to learn. Rick DuFour stated it succinctly in 2004: "The difference between a formative and summative assessment has also been described as the difference between a physical and an autopsy. I prefer physicals to autopsies." The top-tier school leaders highlighted throughout this book give school-wide interim assessments four to six times a year, and never more than eight weeks apart. This distribution rate allows time for teachers to make changes, while not overwhelming students (and faculty) with "test fatigue."[9] In addition to those interim assessments, Mary Ann and other successful school leaders also develop systems to work with fellow leaders and teachers to review student work on a weekly basis—more on that later in this chapter.

Aligned

To make sure that interim assessments have sufficient rigor, they must be carefully aligned to the "end-goal" assessment of that class. Herein lies the critical question for any teacher or leader: What end goal will you aspire to for your students? Remember: it is not enough to say that we want "critical thinking" for our students or "problem solving." Too many schools have fallen into the trap of thinking they're making progress simply by espousing these words. Your assessment will define what you mean. There are a few levels of alignment:

- **State-test aligned.** I do not know of students who can fail their state test and be ready for college. That being said, there are many students who pass their state tests and are

still not ready to attend or succeed at college. State tests, then, are a necessary but insufficient step toward college readiness. It is important to make sure students can meet this bar, and if that is in question, then part or most of the interim assessments should be aligned to the preliminary rigor of the state test.

- **College-ready aligned.** This is the ultimate goal. For high school, there are many assessments already well defined: Advanced Placement, International Baccalaureate, SAT. These can be complemented by performance assessments, such as a well-designed research paper that all students will be required to master. For elementary and middle schools, the task of being college ready is less well defined, but the leaders cited in this book aspired to above-grade-level proficiency for all their students. That takes the form of integrating algebra earlier into the math curriculum (and assessing accordingly) or setting higher targets for proficiency on leveled reading assessments. In each case, the leaders were not satisfied with state proficiency alone. One common pitfall of implementing data-driven instruction is that if schools do not have a single "north star" assessment they can use to align their rigor to college-ready standards, they err on the side of administering too many different assessments, few of which reflect a college-ready level of rigor. Thus another important step is to eliminate any assessments that *aren't* aligned to college-ready rigor, and to build all assessments and curriculum around a limited number that *are*.

Blazing a Trail: A High School Approach to "College-Ready Rigor" on Interim Assessments

In concrete terms, what does it mean to design an assessment with college-ready rigor? Although the specific steps may vary depending on the content area involved, there are several common features. For example, when Mike Mann's teachers at North Star Washington Park High School design their interim assessments, they start with existing high-rigor materials. One of Mike's English teachers, Beth Verrilli, shares: "It starts with taking every practice AP and SAT exam out there and looking at the types of passages they have: the lengths, whether fiction or nonfiction, if nonfiction then what type of nonfiction." Once the passages were identified, Beth then looked to the type of questions being asked and their level of challenge: literal comprehension, main idea, tone, and perspective.

Finally, Beth and the English Department adapted their curricula based on the level of challenge identified in order to be "college ready." "The early high school years serve as a bridge between the eighth-grade state test level of challenge and the more

rigorous demands of college-ready assessments," Beth explained. "Because we know where our end goal is in year 4, it makes planning years 1 and 2 much easier."

- **Curriculum sequence aligned.** Once you have an assessment that establishes the appropriate level of rigor, then you need to make sure that those assessments are aligned to your curriculum. Namely, in the corresponding six to eight weeks prior to each assessment, does your curriculum teach the standards that will appear on that assessment? If not, teachers will rightfully protest that you're not testing what they're teaching—which defeats the whole purpose of interim assessments.

Cumulative

Interim assessments are not unit tests: they need to keep measuring all that has been learned throughout the year, not just the most recent unit. This is critical because of how difficult it is for children—and adults—to retain learning. Think about your own education. Many of you took classes like calculus in high school or college. If you had to take a final exam in that subject today, you likely would not do nearly as well as you did then (unless you continue to use that math). Why? If you don't use it, you lose it.

Core Idea

If you don't use it, you lose it.
Reassess student material all year long to help students hold on to the learning.

If this is the case for us as adults, why do we expect third graders to learn about measurement in September and be able to show mastery in March if they are not asked to do any measurements in the months in between? Reassessing standards throughout the year makes retention possible. This principle is just as critical at the high school level. If students are preparing for an AP exam with vast amounts of content, they need to keep using that content to help them retain it.

A Word on . . . Data-Driven Instruction and Kindergarten

To those who think that data-driven instruction has nothing to do with kindergarten classrooms, you haven't talked to kindergarten teachers! Strong kindergarten teachers

are the most data driven of any: they track students' performance on their letters, sounds, shapes, numbers, and so on. Although these teachers don't use traditional paper-and-pencil assessments, they are driving instruction with data every day. That is a huge reason why kindergarteners can make such gigantic leaps in learning. Respond to student needs, and learning improves. Kindergarten teachers can teach us this lesson as well as anyone!

Developing interim assessments that meet these high bars can be a challenge. Back in 2010 when *Driven by Data* was first published, many of the most successful schools simply created their own. The drawback, however, is that the whole-cloth creation of new assessments can be extraordinarily time consuming, especially if a school has not done it before. Thankfully, that is no longer the only pathway. A second possibility is for leaders to request interim assessments from schools that have already been successful in implementing data-driven instruction. For the most part, these schools will be happy to share their approach to testing, saving an incredible amount of time. If you do use another school's materials, it is still important to make sure that any "borrowed" assessment is well aligned. Each state has different benchmarks and year-end assessments, and each school and district has a separate sequence of teaching its standards. If you're taking tests from elsewhere, there's a good chance your curriculum won't line up chronologically. This will leave you with one of two options: change your curriculum sequence to match that of the interim assessment, or change your interim assessment to test standards in the same chronological order as your curriculum. Either way, you have still saved a ton of time in creating assessments.

Feasibility Tip: Coping Mechanisms for Imperfect Assessments

In many large school districts, principals and teachers may be required to use district-mandated assessments that don't meet all the criteria we've described. Fortunately, we've seen public schools nationwide work around these limitations in order to build effective data systems. Here are a few of the most common strategies used:

Common, interim: Are they not every six to eight weeks?

- Too far apart: place an additional interim assessment in the gap.
- Too many assessments too frequently: deprioritize some to focus only on those where deep analysis is possible and most valuable.

Transparent: Do teachers not see the interim assessments in advance?

- Give teachers the interim assessments to review at a faculty meeting.
- Give teachers a set of proxy questions from an item bank that are tightly aligned to the rigor of the interim assessment.

Aligned: Are they not aligned to your state's standards and the rigor of the questions?

- Add questions from item banks that are more aligned to the difficulty level of your year-end test.
- Give teachers sample items and have them design more.
- Borrow other schools' assessments.

Aligned: Are they not aligned to instructional sequence?

- Change sequence to match assessment (or vice versa).

Cumulative: Do they not spiral content throughout the year?

- Add spiraled content questions to the end of assessment.

The box "Data-Driven Instruction" summarizes the key criteria for effective assessments, both on a global level and specifically for interim and weekly data collection, respectively.

Data-Driven Instruction

Key Criteria for Effective Assessment

- **Common, interim**
  - At least quarterly
  - Common across all teachers of the same grade level
- **Transparent**
  - Teachers see the assessments in advance
  - The assessments define the road map for teaching
- **Aligned**
  - To state test (format, content, and length)

- To instructional sequence (curriculum)
- To college-ready expectations

- **Cumulative**
  - Standards that appear on the first interim assessment appear again on subsequent interim assessments

A Word on . . . "Teaching to the Test"

One frequent objection to data-driven instruction is that a focus on assessment amounts to empty "teaching to the test." In this view, data forces teachers to choose between "real" teaching and irrelevant test preparation. If the assessments a school uses are not rigorous enough, or if they are not aligned to what students need to know, then this is a valid critique. However, when interim assessments are well constructed and college ready, they are an unparalleled resource in driving student learning. If you want students to be able to write a six- to eight-page paper stating an original argument, why wouldn't you teach to get them to do so effectively? In the same way, if students will need to solve a quadratic equation embedded with an area problem on the SAT, shouldn't we prepare our students to succeed?

More pragmatically, in modern America the ability to do well on assessments is an unavoidable reality when it comes to gaining admission to the college of students' choice and in almost every major profession—from firefighters to doctors. One can argue that society *ought* to work differently, but as educators, we must prepare students to succeed in the real world around them.

In any case, the message is clear: students who are not prepared for high-quality end-goal assessments have not learned what they need.

In the end, data-driven instruction is not about teaching to the test; it is about testing the teaching. That makes all the difference.

ANALYSIS: WHAT AND WHY DIDN'T THEY LEARN?

Shane Battier's career stat line as an NBA basketball player is rather pedestrian: over fourteen years from 2001 to 2014, he averaged per game only 8.6 points, four rebounds, two assists, one steal, and one block.[10] Of course, just getting to the NBA is

extraordinary, but against that level of competition, nothing in these statistics suggests preternatural talent. Yet he was one of the most sought-after defensive specialists, and he constantly guarded the most talented players of his era (Kobe Bryant and LeBron James, among others). The superstars routinely had subpar performances against him, but no one could figure out why. He wasn't fast, nor did he have quick reaction time, and he didn't force many turnovers. In fact, his opponents were so convinced that Battier was just "some chump" that they repeatedly attributed his defensive prowess to an "off night" on their end—even though they repeatedly had those off nights when he was the defender, and statistics proved it.

So why did Battier have such defensive success that he was dubbed by Michael Lewis the "No-Stats All-Star"?[11]

Because Battier's gift wasn't about his physical abilities: it lay in his ability to see. He could look at data about his opponents' past performances and see a clear path to the outcome his team needed. For instance, Battier knew that Kobe Bryant's ability to score points for his team dropped dramatically when Bryant shot from the left instead of the right, so he would force Bryant into that zone. Bryant would still make the shots at times; Battier was just lowering his odds. But over time, that added up to fewer points scored. In short, Battier looked at the right data, and deeply enough, to change the result—to change it so profoundly, in fact, that he made Bryant's team score *worse* than if Bryant had never been on the court that day.

What Battier did is part of a data analytics craze that has swept through every major sport in the world. Kevin Durant used the same approach to target his weakest shooting spots and increase his efficiency.[12] Swimmers and cyclists study their drag and form to shave milliseconds off of their times. All athletes follow tightly prescribed diets that maximize stamina, speed, muscle growth, and recovery. You no longer can win on just talent: data drives results.

Core Idea

You cannot win on talent alone. Data harnesses talent to drive results.

These same realizations have come into education. We know that good teaching has a positive impact itself, but there is never enough time in the school day to teach everything we would like. But therein lies the secret: if we want to have more time for

teaching, we need to spend less time on what students already know, and more on what they need.

Core Idea

How do we make more time for learning?
Spend less time on what students already know and more on what they *need*.

Analysis of student work can buy us that time. In essence, you are learning to see what students need. What follows are the key strategies to make this sort of analysis possible.

Immediate Responsiveness

Mary Ann protects data analysis more diligently than any other action in her schedule. Why? Because data expires quickly. For every day that passes between the time of an assessment and the implementation of a new teaching plan, students are not learning what they actually need. Laura Garza, whom you met in the Introduction and will see again in Chapter 5, is of the same mind. "The rest of my calendar might need adjustment from week to week," says Laura, "but data analysis meetings—those are sacred times."

As a rule of thumb, this means reviewing student work as quickly and as efficiently as possible—within twenty-four hours or at maximum one week, depending on the length of the assessment. At the end of the chapter, we will address how to make a yearly calendar that incorporates time for analyzing results from interim assessments as well as more regular grade-level team data meetings.

User-Friendly Reports

Before you can analyze, you have to have the right data in hand. For starters, we are not talking about year-end data. At that point, the year is over, and there is nothing you can do to undo the learning or lack thereof. Great data analysis begins by looking at interim assessment results and then goes further into daily student work. To do so, you need clear and intuitive data reports.

The figure here shows a sample of what an effective data report might look like.

Literacy 5-3 Results

Questions #				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
RESPEITO	MULTIPLE CHOICE: TOTAL CORRECT	MULTIPLE CHOICE: % CORRECT	WRITING: AVG. SCORE (OUT OF 4)	Main Idea/Theme (RL.5.2)	Compare/contrast characters (RL.5.3)	Passage Structure (RL.5.5)	Figurative Language (RL.5.4)	Figurative Language (RL.5.4)	Narrative Point of View (RL.5.6)	Meaning of vocab/phrases in text (RL.5.	Main Idea/Theme (RL.5.2)	Write--Compare stories same genre (RL	Prepositions (L.5.1a)	Consistent tense (L.5.1d)	Perfect tenses (L.5.1b)	Too/to/two	Pronouns	Punctuation (L.5.2)	Main Idea/Theme (RI.5.2)	Meaning of vocab/phrases in text (RI.5.	Main Ideas of a Passage (RI.5.2)
Student Name				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Ashanti	39	98%	92%					a				4									
Shelton	37	93%	83%									4									
Imani	27	68%	75%				c		d	a	d	3									
Lamar	32	80%	67%					a				2						c			
Mary	29	73%	67%				b		a		a	2					a				
Terrell	25	63%	50%	b		b	b	a				2						c			
Jessica	21	53%	58%					a			d	2	d	d	b		a			b	
Shannon	28	70%	50%				b	a	a			2			d					c	
Al-Quan	18	45%	50%		d	c	b				d	2		c	d					c	
TOTAL CORRECT PER Q:				18	17	16	10	9	15	19	13	2.8	18	18	13	20	13	15	21	15	19
% CORRECT PER Q:				86%	81%	76%	48%	43%	71%	90%	62%	62%	86%	86%	62%	95%	62%	71%	100%	71%	90%

Repeated 5-1 Standards:	**73%**
Main Idea/Theme--Lit (1,8,27):	76%
Main Idea/Theme--Info (16,18,38):	92%
Use evidence--Lit (3,6,29,31):	**73%**
Use evidence--Info (20, 39,42):	**68%**
Punctuation (15,24,32):	83%
Writing--persuasive (21)	48%

Repeated 5-2 Standards:	**75%**
Vocab/phrases in context--Lit (7):	90%
Vocab/phrases in context--Info (17,40):	55%
Characters: compare/contrast (2)	81%
Verb tenses (11,12,25,34):	**71%**
Other Grammar (13,26,33,36, 37):	83%
Writing from multiple texts (43)	**67%**

	MULT. CHOICE:	WRITING:
RESPEITO	**73%**	58%

Respeito Performance 5-1 Standards:	**60%**

Note the many remarkable characteristics of this table. First, everything for one group of students fits on one page. At a minimum, these reports show class performance at four levels:

1. **Question level:** how students performed on each question and what wrong answer choices they made. This is incredibly important; Beth Verrilli notes, "On a standard like main idea, it's not enough to know the overall percentage. I need to know what makes them struggle: Have they not mastered the skill of main idea in general, or was it the content of this passage that they were unprepared for, the challenge of new vocabulary, a challenging answer choice, or other factors?"
2. **Skill or standard level:** how students performed on each standard or skill.
3. **Student level:** how well each individual student performed.
4. **Global or whole-class level:** how well the class performed.

The template for a data report needs to be concise and easy to understand, enabling teachers to enter and interpret data with as small of a learning curve as possible. Although there are endless ways you could adapt data reports to summarize the results of different assessments, it is essential that the format you choose makes plugging in new data a simple matter and that the results are easy for others at your school to read and comprehend. If the data report is not intuitive, it will not be informative. And if it takes too long to fill out, you have less time to focus on actually analyzing it.

Back in 2010 when *Driven by Data* was first published, there were very few data reports that met these criteria; most were too cumbersome or provided too much data. Today there are a large number of online tools that process and display results like these. (Illuminate is one strong example.) But many of the schools getting strong results still use simple Excel spreadsheets. The key is not the sophistication of your tool but the simplicity of reading your data. Less is more.

Core Idea

The key to effective analysis is not the sophistication of your tool but the simplicity of reading your data. Less is more.

Deep Analysis—Teacher-Owned, Test-in-Hand

Once your data is in place, now you can do the actual analysis. Mary Ann, and leaders like her, start by figuring out where to focus.

Look for the Patterns

When Mary Ann dives into data analysis, her goal is to get every student to 100 percent mastery. This means that if 100 percent of a class is already answering a question correctly, she won't be looking into reteaching that content. Conversely, if a large portion of the class gets specific questions wrong, that material probably does need to be retaught; and within each set of incorrect answers, patterns in *where* students went wrong are extremely critical for Mary Ann to identify. Only then can she get students the instruction they need, instead of repeating what they already know.

To better understand how this works, let's apply the process to a multiple-choice assessment. Look at this data sample. Let's begin by analyzing the data at the standards level.

Standards-Level Analysis

	Sentence Completion	Main Idea	Extended Reasoning	Supporting Details	Vocabulary in Context
% Correct	73	55	76	60	75

It's apparent that main idea is a serious challenge for this group of students.

See the Gap

But when we analyze these assessment results at the question level, we find something unexpected:

Question-Level Analysis

Main Idea Question Number	10	19	29	32
% Correct	83	23	45	63

Zeroing in on specific questions related to main idea allows Mary Ann to see the most important gap in the students' learning. In this case, the students' problem is not with every aspect of main idea but only with certain types of main idea questions. To find out which part of this content is so difficult for students, let's turn to question 19, which only

23 percent of students answered correctly. The question concerns a short passage on the work of Edgar Allan Poe. Where did the class go wrong when they responded to it?

Single-Question-Level Analysis

1. The author's purpose in this passage is to [correct answer appears in **boldface**]:
   A. Detail the myths and inconsistencies surrounding the personal life of a renowned author
   B. Demonstrate that professional authors can succeed despite scathing criticism
   C. Call attention to the fact that literary critics have erred in their judgment of Poe's writing
   D. Argue that Poe's early negative publicity had continued repercussions throughout his writing career
   E. **Show that contradictions in Poe's life and work do not detract from his popularity**

Answer Choice	**A**	**B**	**C**	**D**	**E**
% of students who selected it	58	0	0	9	33

The data makes it clear that most students were drawn to answer choice A. Given the amount of time the passage in question spends discussing inconsistencies in Poe's work, this answer would seem plausible. Yet the final answer choice, answer E, is the only one to take into account the passage's substantial discussion of Poe's popularity and legacy, a key part of the text that answer choice A misses. In short, students are selecting a "narrow" answer that does not cover the whole passage. Question 29, which saw similarly low levels of student performance, revealed the same error pattern: when students were wrong, their answers did not encompass everything they had read. That's the gap in the learning.

Informed by this analysis, you can identify a few specific strategies that will be effective: prompting students to distinguish ideas that are too limited from those that are sufficiently broad, for instance; and requiring students to link a main idea they've identified back to each paragraph in a text. But just as important as the strategies you might now suggest to a teacher are the ones you'll know *not* to suggest. You wouldn't, for example, recommend repeated practice on discarding overly broad main ideas, because although developing too-broad main ideas is an error that English students

often make, it's not the one these English students are making now. Again: focus on what students need, not on what they already know.

A Word on . . . Data Analysis for Open-Ended Questions

When it comes to data-driven instruction, open-ended questions present a unique set of challenges—and opportunities. Steve Chiger, an acclaimed former high school English teacher and the director of middle school–high school literacy for Uncommon Schools, shares that the beauty of analyzing student-generated responses is that doing so gives us the opportunity as educators to "geek out" together about the content we fell in love with.

Let's take a look at this open-ended response prompt designed by Steve.

Isaac, After Mount Moriah
Asleep on the roof when rain comes,
water collects in the dips of his collarbone.
Dirty haired boy, my rascal, my sacrifice. Never
an easy dream. I watch him wrestle my shadow, shut eyelids
trembling, one fist ready for me.
Leave him a blanket, leave him alone.
Night before, found him caked in dirt,
sleeping in a ditch, wet black stones for pillows.
What kind of father does he make me, this boy
I find tangled in the hair of willows, curled fetal
in the grove?
Once, I found him in a far field, the mountain's peak
like a blade above us both.

Saeed Jones

Prompt: How does Jones use language to characterize the relationship between Isaac and Abraham in "Isaac, After Mount Moriah"? Mention specific cases of figurative language the poem uses to make its point.

On paper, this looks like a very strong prompt. Yet recall from earlier that the rigor will only be determined by how we evaluate the responses. Although a rubric will help us somewhat, the best way to begin your analysis is with your own exemplar response. As I often state in PD on data-driven instruction, *you raise the bar when you spar with an exemplar.* Why? Because you don't limit yourself to what students were able to do but keep a clear focus on where you want them to go.

When you set out to script your own exemplar student responses to open-ended prompts, keep in mind the following tips:

- **Write at the level the medium- to high-achieving students in your class are capable of.** Ultimately, exemplar student responses come from your mid- to high-level students, so you'll set the right level of rigor by emulating them.
- **Don't worry about the exact wording or precise thesis of your response.** There could be many correct arguments to make about this poem, or any poem! The goal of an exemplar isn't to create a cookie-cutter answer that every student's response should match but to write a high-quality piece of literary analysis that would earn your students a 4 or 5 on the AP exam if they were to produce it themselves.

Crafting the exemplar changes the game for any subject—not only for open-ended literary analysis but also for written response questions in science or history and for problems that require showing your work in math. With an exemplar in hand, you will find that the analysis of student work becomes much easier: you look for the gaps (in thesis statements, evidence, transitional phrases, inferences, structure, and so on). In doing so, you will push the quality of the writing faster and more effectively.

A Word on . . . Special Needs Students and DDI

As we give workshops across the globe, one of the most frequently raised concerns is whether or not this actually works for special needs students.

I've had the chance to interact with and learn from the highest-achieving special education teachers, and to a person they tell me: data-driven instruction is at the heart of what they do. When you serve children with specific learning needs, you are identifying their personal gaps and designing teaching strategies to match. There is no other choice: if you aren't data driven, your children won't learn!

Natascha de la Torre, an incredibly successful SPED instructor at Vailsburg Elementary School in Newark, New Jersey, says data-driven instruction is one of the most important tools she uses to help special needs students meet learning goals. "You have to know where you want every student in your class to be, but also to understand each individual student's learning profile," Natascha says. "That means you need to identify a realistic place you might get that student to first. Being data driven lets you build a trajectory that will get them to that larger goal eventually. It might take some of my students longer to meet those goals, but we're not going to lower the bar."

Here are some of the tips special educators like Natascha have shared with me to pass on to you and your special education teachers.

First line of action: grab the low-hanging fruit.

Often the challenge of analyzing interim assessment data for a student with special needs can be that there are too many questions "in the red"—that is, where the student was not proficient. When that happens, start with the low-hanging fruit:

- Sort classroom data by students' scores: look for the questions that only the struggling students are getting wrong. These are likely the easiest access point, and other questions will likely be addressed by the general education teacher in the large-group setting. Natascha points out that this sorting process helps students of all learning abilities, because in addition to clarifying which standards need to be retaught specifically to special needs students, it also ends up underscoring the other standards that need to be retaught to *everyone*.
- From there, follow the same steps of analysis as for any other student:
  - What are all the steps the students need to take to answer these questions correctly?
  - Which of these steps need to be made more explicit to the students?
  - What sort of practice do the students need to master this standard—heavy repetition of computational skills? Following a multistep protocol?

Second line of action: provide in-class support during reteaching.

For special needs students who take classes with their general education peers, the best thing to do is support the general teacher during reteaching:

- What are the standards that will be reviewed or retaught for the whole class?
- Are the struggling students' misunderstandings on these standards different than those of the rest of the students?
- What additional support or steps will the struggling students need when these standards are being reviewed?

In short, as Natascha's colleague Michelle Rolfert puts it, "The only difference between the general education setting and the special education setting is the need to reassess more frequently and with differentiated assignments. The process is the same."

ACTION: TEACHING AND RETEACHING TO MASTERY

All the quality assessments and deep analysis are meaningless if we don't act. Until we teach differently, learning won't change. At the same time, action without proper analysis is meaningless: it's just spinning your wheels.

Core Idea

Assessments and analysis are meaningless if we don't act.
Yet action without analysis is meaningless: it's just spinning your wheels.

So what does effective reteaching—and teaching in general—look like to achieve mastery?

When I wrote *Driven by Data,* I was obsessed with trying to observe successful reteaching efforts in every school I visited. As I observed the highest-achieving teachers, I thought I would discover a multitude of different strategies for reteaching. Although I did, I also noticed that there was a pattern of effective reteaching, and that it could boiled down to two basic principles:

- Reteach the material in one of two ways: modeling or guided discourse
- Monitor student work—continually

Let's unpack these principles in detail.

Choosing How to Reteach

After observing thousands of teachers in action, we discovered that there are really two basic options for reteaching: modeling or guided discourse (with many variations within each). Modeling is called many things, such as the I Do or the think-aloud or even the mini lesson, but all of them focus on the teacher showing the students what to do. Alternatively, guided discourse—often called inquiry or class discussion or Show-Call—does the opposite. Its goal is to guide student discussion to get students to figure out the error themselves and coach each other to success.

Most teachers I've talked with have a strong opinion as to which is more effective. However, the best teachers use both methods, matching them to the needs of the students and the strengths of their teaching. Based on their guidance, the following is a quick summary of some of the pros and cons for each approach that can help you determine which method is the most appropriate in a given situation.

Modeling Versus Guided Discourse

Teaching Method	Pros	Cons
Modeling	• Easier to plan. • If students don't have a model of success to refer to, they probably won't be able to replicate success.	• Can be too procedural, as opposed to conceptual. • Dependent on students learning passively at first.

Teaching Method	Pros	Cons
	• Clarity: there are clear, bright lines around what students must do.	
Guided Discourse	• Stickier, because students learn more actively and do more of the thinking. • Easier to dig deeper on a conceptual level.	• Harder to plan, as it's dependent on excellent questions and ability to manage the discourse. • Dependent on some students being close enough to push remaining students the rest of the way. • Can result in only the most advanced students understanding.

In general, modeling is a better option for a newer teacher who is still working on classroom management, and also for reteaching when there's no exemplar answer in the classroom for students to turn to. If there is already an existing exemplar students can use to define what success looks like, guided discourse can often go deeper.

Let's dive into the details of how reteaching functions on the ground, beginning with the easier of the two: modeling.

Modeling

On the surface, modeling is simple: show the students what to do. Effective modeling, however, takes that simple idea and adds much more depth. Moreover, it can be effective not only for younger grades but for older students as well. Art Worrell from North Star Washington Park High School shows us what this looks like in his AP US History class.

WATCH Clip 3: Worrell—Think-Aloud—Set Listening Task (Teaching Clip)

WATCH Clip 4: Worrell—Think-Aloud—Model the Thinking (Teaching Clip)

Stop and Jot

What does Art do to model the thinking for his students?

Art took a complex skill—unpacking the previous knowledge that can be ascertained from the prompt—and made it simple. But he also made sure the students were set up to maximally benefit from the model. Here are the keys.

Provide a clear listening or note-taking task. Art gives students a clear listening or note-taking task that fosters active listening to the model. Then he debriefs the model, asking:

- "What did I do in my model?"
- "What are the key things to remember when you are doing the same in your own work?"

Model the thinking, not just the procedure. What makes Art's model different than many is that he models the thinking it takes to solve the problem, not just a rote procedure. Narrow the focus of the model to highlight the thinking students are struggling with, and then demonstrate replicable thinking steps that students can follow. Students will then learn how to think, not just act. That will enable them to take on a much broader set of future problems rather than becoming procedural.

End with You Do. Of course, a model is only valuable if students then get the opportunity to apply it.

Guided Discourse

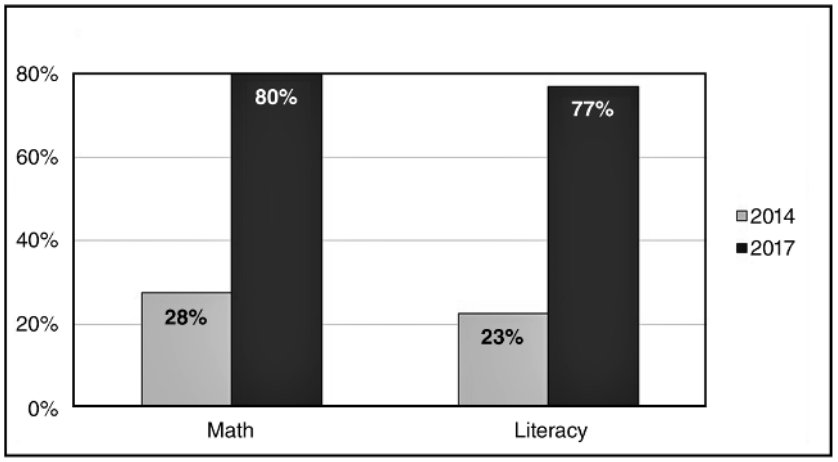
Guided discourse is often seen as the magic in the classroom, when students engage in rigorous dialogue that reaches deep, thoughtful conclusions. Yet there are many pitfalls to avoid. As one teacher shared with me, discourse can be like a squirrel—you never know quite where it is headed, and it can run up the wrong tree really quickly! So how you do get that squirrel of discourse running up the proper tree?

Andrew Schaefer shows us an example of how to do this. Andrew worked with Juliana Worrell at Alexander Street School in Newark, New Jersey, the site of the most successful school turnaround in Newark.[13] As Figure 1.2 shows, their results are truly groundbreaking (more on her top actions in *The Principal Manager's Guide to Leverage Leadership*).

In Clip 4, you'll see part of what made them so successful. Fifty percent of the class has gotten the wrong answer to question on a fraction of a whole. Watch what Andrew does to drive discussion.

WATCH Clip 5: Schaefer—Guided Discourse (Teaching Clip)

Figure 1.2 New Jersey State PARRC Test Results: Alexander Street School, Percentage at or Above Proficiency in Third and Fourth Grades



Stop and Jot

How does Andrew guide his students to generate the answer themselves?

Have students write first, talk second. Before beginning discourse, Andrew has students complete a writing task. That enables him to monitor, collect data, and anticipate where the conversation will go. It also gives him the opportunity to determine which students have strong answers and which are struggling so that he can call on them at key moments during the discussion. Too often, teachers start with discussion; let 100 percent participate before you do so!

Use Show-Call. Andrew makes a very simple move at the beginning of the discourse that changes everything. Instead of talking, he simply displays two samples of student work. Think about the power of this action: he has reduced the amount of teacher talk taking place significantly, and he has shifted all of the thinking back to the students. Doug Lemov calls this Show-Call.[14] You can do this with exemplar student responses, incorrect responses, or, in this case, with both.

Start with a Turn and Talk, then poll the room. Rather than begin with large-group discussion, Andrew starts with a Turn and Talk. This action sounds simple, but it is often overlooked. Turn and Talks maximize the number of students who are sharing during discussion. They let everyone work their thinking out verbally with a peer before sharing in the large group. Andrew then takes it one step further by polling the room to see where students stand before starting the discussion. In this way, he has an immediate idea of where students are. This enables him to decide how to manage the conversation.

Employ strategic questioning. Once the class comes together for a large-group discussion, Andrew uses the data he collected from the writing task and classroom poll to call on students based on their learning need. In this case, everyone agreed with the

right answer after the Turn and Talk, so Andrew can call on a student who initially had the wrong answer to check for understanding to make sure he or she knows why the right answer is correct. If most of the class was still struggling, he could call on someone who had the right answer initially to justify his or her response. Strategic questioning enables Andrew to reduce the likelihood of haphazard conversation and to get students grappling with the key learning challenge.

End with You Do. Just as with modeling, the learning that results from guided discourse doesn't get solidified until students have the opportunity to try it again on their own.

Monitoring Student Work—Continually

Active monitoring of student learning in the classroom is as important as the reteaching itself. Why? Because learning doesn't happen in a single moment—it happens over time.

When you are learning to master something, such as a piece of music on the piano, you first learn the basic chords and then add intonation and complexity to create a beautiful sound. That doesn't happen overnight. Neither does reteaching.

Denarius Frazier is a highly successful math teacher at Ashley Anderson's school, Uncommon Collegiate. (See more on Ashley and her success in Chapter 3.) He discovered early on that a single successful reteaching lesson didn't seal the deal for his students. "I needed to follow up for multiple days to see if they retained it," he recalls. "Only when they can utilize linear equations consistently in each upcoming unit do I know they have mastered it." Denarius stumbled on a key idea: reteaching is a relay, not a sprint.

Core Idea

Reteaching is a relay, not a sprint.

Any reteaching that ends on a single day won't have the same long-term success as reteaching to which a class returns multiple times: you might have won that leg, but not the race. Monitoring sets the teacher's focus on whether the students learned what the teacher taught—and learned it well enough to succeed consistently.

If you want to dive further into monitoring, we cover it quite extensively in *Get Better Faster* (see "Monitor Aggressively," pp. 205–220). Meanwhile, however, here

are four core strategies that instructors like Denarius use to monitor learning day by day:

- **Monitor independent practice.** By circulating when students do independent work and reading their responses, Denarius can quickly see what they're able to do on their own.
- **Spiral content within lessons.** Denarius takes students back to previously covered material when they struggle, working to discover where their knowledge is breaking down—and to make sure they're remembering what he's already taught.
- **Observe small-group work.** What do students say to each other in pairs or small groups as compared to in a whole-class discussion? Denarius finds that the answers are incredibly revealing.
- **Adjust Exit Tickets, Do Nows, or homework.** When necessary, Denarius adjusts his assignments to his students both during and after class so that their work will show him what he needs to know about their learning.

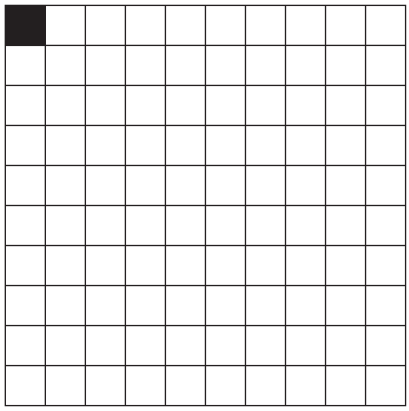
Assess. Analyze. Act. Three basic actions that profoundly transform a school and the quality of student learning. Yet so many obstacles can get in the way of teachers and leaders remaining focused on this approach. What separates leaders like Mary Ann from the rest is the ability to implement the systems that lock in these actions. Let's take a look at what those are.

PUT IT ALL TOGETHER—LEAD DATA MEETINGS

What is the highest-leverage thirty minutes for a school leader? That is a loaded question, but let's give it some thought. Consider a principal who is committed to observing class instructions as often as possible. If the principal observed every teacher in his or her school for fifteen minutes a week, she would be among the most diligent school leaders in the country. Yet even at this breakneck pace, how much instruction would she actually see? Do the math:

- Typical teaching load: 5 classes/day, 50 minutes each
- Total minutes of instruction per week: 5 classes/day × 50 minutes × 5 days/week = 1,250 minutes
- One classroom observation per week: 15 minutes
- 15 minutes/1,200 minutes total instruction = 1.2% observation of instruction

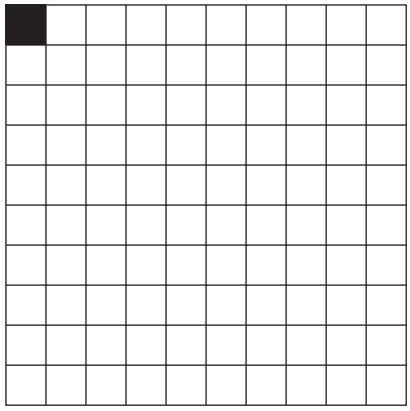
As hard as it is to believe, she would see only 1 percent of the week's learning:



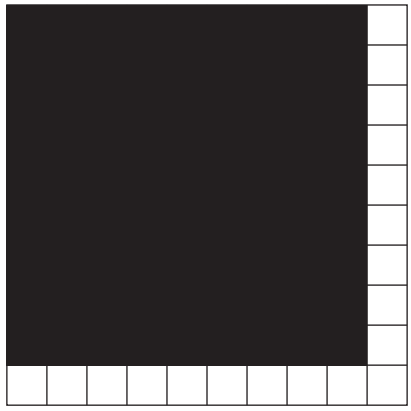
For all her attentiveness, this principal is watching her students through a peephole. Even if leaders are able to identify the most critical 1 percent with these observations, they would still need to make broad, vague conjectures about the standards learned the other 99 percent of the time.

Now consider a leader who has rolled out data-driven instruction. Reviewing interim assessments alone, that leader can gauge *six to eight full weeks of teaching.* No assessment can capture 100 percent of the learning in a class, but an effective assessment can certainly capture 80 percent of it. In one meeting, that leader has changed the percentage of instruction she observes from 1 percent to a game-changing 80 percent:

Observation Alone



Interim Assessment Analysis Meeting



Core Idea

Data meetings shift the focus from observing 1 percent of the learning to 80 percent. That makes all the difference.

So what do effective data meetings look like? Mary Ann has made herself an expert in them. She follows a simple, replicable protocol that all of her grade-level teams use. We made mention of it in the Introduction: See It, Name It, Do It.

- **See It:** see the exemplar and the gap
- **Name It:** name the key gap in conceptual understanding for the students
- **Do It:** plan how to reteach the content with modeling or guided discourse, and build a follow-up plan

To see how these steps apply to a leader's work in practice, we'll follow Mary Ann's school through one of her data meetings. Read on to see what actions Mary Ann takes to make this meeting successful.

Prework

Muhammad Ali once said, "The fight is won or lost far away from witnesses—behind the lines, in the gym, and out there on the road, long before I dance under those lights." He won every championship before he even stepped foot in the ring.

Nowhere is this more the case than data analysis meetings. Mary Ann does not merely schedule data analysis meetings and sit back and hope they succeed; her actions prior to the meeting are what guarantee their impact. Follow her lead to set up effective meetings, be they interim assessment analysis meetings or weekly data meetings.

Analyze the Data *Before* the Meeting

Mary Ann doesn't simply hope for good analysis—she makes sure of it. She and her instructional leaders look at the student work in advance so that they can identify the patterns, pick out key questions where they can focus, and have a preliminary idea of the analysis and action plan. This will prepare them to step in to support the teachers whenever their analysis isn't deep enough or their action plan won't close the gap. To prime the pump for the meeting, do the following:

- Review or write the ideal interpretation of the standard being addressed.

- Identify the gap in student understanding.
- Plan the key part of an effective reteach plan to address that gap.

Have the Room and Materials Ready

One of the most striking things about highly effective data meetings is how smoothly they run. That is due in no small part to having the room set up with all the materials. Here is a quick go-to list that leaders like Mary Ann use to set up their meetings:

- Timer
- Copy of the standard and exemplar response
- Chart paper and/or whiteboard to take notes
- Upcoming lesson plans and any materials needed to plan a reteach lesson
- A sample of high, medium, and low student work—typical errors that are representative of the majority of the students (this will save hours of sorting student work during the meeting and let teachers focus on the analysis itself)

The importance of this preparation cannot be overstated: you are supercharging the meeting and stripping away time that would be lost in nonessential actions. In this way, you have thirty minutes of deep conversation, rather than just ten to fifteen; that makes a huge difference over time.

A Word on . . . Content Expertise

One of the most challenging aspects of preparing for data meetings—and participating in them—is having a level of content expertise that allows you to dive into the assessments to determine the errors. This can be a daunting task even for third-grade math, but it becomes even more challenging as you get into higher-level content. For a high school instructional leader, it is next to impossible to have enough content expertise to deeply analyze AP-level chemistry, English, history, calculus, Spanish, and more!

So what do leaders do when they have to coach outside of their own content expertise? They find other experts to help them.

Eric Diamon, whom you'll meet again in Chapter 8, has found this especially helpful when coaching his eighth-grade algebra teacher. Eric's background is in the humanities, and his knowledge of the content she teaches is limited. "I find that my work with her is where it's most challenging for me to be a value add to her work," Eric confesses. To support this teacher, Eric takes two steps: developing his own content expertise in

math, and seeking out help from other educators. "I attend any math PDs I can, which has definitely been helpful," Eric says. He is on to something: to become a content expert, participate in as many data analysis meetings, planning meetings (see Chapter 2), and PD sessions as you can. Each time you engage in the content by looking at student work or planning a unit, by nature you gain more understanding. Little by little, you'll be on your way to supporting your teachers across all content areas.

Eric's other strategy is to work with another instructor who accompanies him on walkthroughs of STEM classrooms across his middle school campus. "That helps me develop my eyes for math," notes Eric. Support of this nature may come from a coach, department chair, strong teacher, or someone outside the school. Beyond this, you'll build your own content expertise simply by engaging in deep data analysis with your content experts again and again.

See It and Name It

With the preparation locked in, Mary Ann is ready to lead meetings of impact. Watch how quickly Mary Ann is able to dive into the work of the content itself. In this clip, she's working with her special needs student support team, and her assistant principal is also in attendance.

WATCH Clip 6: Stinson—See It (Standard)—Weekly Data Meeting

Stop and Jot

What actions does Mary Ann take to start the data meeting successfully? Jot down what you noticed.

See the Exemplar

The most tempting place to start a data meeting is looking for the gap in student work. Yet Mary Ann doesn't start there. Instead, she kicks off the meeting by celebrating the team's successes since the previous week. Then, she preselects a key question to focus on, and they dive in by reviewing the standard and the exemplar response. Why? Looking at the wrong answers first would be like starting a road trip before deciding where to go. You need the exemplar response to give you the pathway.

Core Idea

You don't know where to go if you haven't determined the destination. Use the exemplar to start with the end in mind.

The beauty of reviewing the standard and exemplar side by side is that the standard can give you academic language to describe the student thinking needed to answer the question.

What Mary Ann does in this meeting isn't rocket science, and she didn't become a master of on-the-spot thinking. Rather, she uses a set of prompts that are pretty applicable to nearly any assessment item at any grade level:

- "What does a student need to know and be able to do to master this standard?"
- "What were the keys to an exemplar answer?"
- "How does the exemplar response connect to the standard?"
- "How does your student exemplar compare to the teacher exemplar? What is the gap, or does it offer something yours does not?"
- "Do students have different evidence to demonstrate mastery of the standard?"

Step back and note the power of what Mary Ann has done. "Through the process of looking at the exemplar, my teachers got better at seeing what they needed to teach," Mary Ann shares. "That makes it easier to see the gaps. And they also are paying attention to strengths and not just weaknesses: kids came back with stronger and stronger responses every week."

For more evidence of the power of the exemplar in action, take a look at it in another context—math. Watch this video of Nikki Bridges, who at the time this video was filmed was the principal of Leadership Prep Ocean Hill in Brooklyn, New York.

WATCH Clip 7: Bridges—See It (Exemplar)—Weekly Data Meeting

Starting with the exemplar gives Nikki and her team of teachers clarity on what students have to be able to do to master the standard.

Core Idea

When you start from the exemplar, your analysis becomes exemplary.

See the Gap

With an unpacked exemplar in hand, Mary Ann and her teachers are now more equipped to get to the heart of the matter: What are the gaps between the exemplar student response and the student responses that don't reflect mastery? Rewatch Clip 2 from the beginning of the chapter to see how Mary Ann manages this.

RE WATCH Clip 2: Stinson—See It, Name It (Gap)—Weekly Data Meeting

Stop and Jot

What actions does Mary Ann take to get her teachers to see the gap in student learning? Jot down what you noticed.

Here we see the power of unpacking the exemplar: the teachers can use it as a reference to identify the gaps in the rest of the student work. Seeing and naming the gap in this way makes the data meeting powerful. The teachers not only know what to target but also have done so in a collaborative environment that cultivates trust. In this context, discovering what needs to be retaught in a classroom isn't about pointing fingers at teaching "gone wrong." It's about seeing what students need with shared clarity, so that you can reach solutions together. (As you'll see in Chapter 6, looking at data as groups of teachers is a very effective building block for staff culture as well.) In Clip 8, Juliana Worrell accomplishes this just as Mary Ann did.

WATCH Clip 8: Worrell—See It (Gap)—Weekly Data Meeting

Naming the exemplar and the gap seals the deal. Writing down the student error and the conceptual misunderstanding evident in that error locks in *what* went wrong, which will allow the teachers to quickly pivot to *how* to fix it.

Core Idea

You don't lock in the learning until you stamp it.
Naming *what* went wrong makes it easier to plan *how* to fix it.

Do It

With a solid analysis, the teachers are ready to shift their focus to reteaching. Think this only works for younger grades? Not at all. High school principal Ashley Anderson of Uncommon Collegiate (more about Ashley in Chapter 3 on observation and feedback) finds the same value in data meetings like these. Watch in Clip 9 how her HS math instructional leader Denarius Frazier plans for action in his data meeting with a teacher whose students are working to master transformations (calculating the movement of objects in a plane). Then, take a look at Clip 10 to see how Mary Ann walks her team through the same process.

In both clips, you'll hear the leaders ask the teachers what they'll be looking for during different "laps." This refers to act of walking around the classroom to monitor student work. During each round—or lap—the teachers will check for key responses that will indicate that the students are understanding (e.g., in a math word problem, the

first lap could be annotating the question, then setting up the proper equation, then solving correctly).

WATCH Clip 9: Frazier—Do It (Plan)—Weekly Data Meeting
WATCH Clip 10: Stinson—Do It (Plan)—Weekly Data Meeting

Stop and Jot

What actions do Denarius and Mary Ann take to get their teachers to plan the reteach?

Plan the Reteach

What Denarius and Mary Ann lead their teachers to do—plan the reteach—seems pretty standard. Yet most teams of teachers never get that far when analyzing student work. How Denarius and Mary Ann do so is what makes their leadership so effective. Giving the teacher time first to plan independently actually saves time: they have already articulated their ideas before they speak. But the real magic is having them "spar" with another reteach plan; this pushes them to excellence much faster. You need to perfect a reteach plan before you practice: if you don't, you'll just practice doing it wrong.

Core Idea

Perfect the plan before you practice.
If you don't, you'll just practice the wrong way to reteach.

Denarius and Mary Ann's teachers have the opportunity to improve their reteaching plans based on one another's. Bringing the focus to "what would you add" to your plan ensures that teachers focus on the most positive parts of the plan—the strongest elements of it. This way, they can combine their own strengths as school leaders. Both Mary Ann and Denarius use some key prompts that could be used in nearly any data meeting:

- "Should we use modeling or guided discourse?" "Why?"
- "Take ___ minutes and write your script. I will do the same so we can spar."
- "Let's compare our reteach plans. What do you notice? What can we pull from each to make the strongest plan?"

At this point, both Mary Ann's and Denarius's teachers are ready to put it all together. Watch how each leader does it.

WATCH Clip 11: Stinson—Do It (Practice)—Weekly Data Meeting
WATCH Clip 12: Frazier—Do It (Practice)—Weekly Data Meeting

Stop and Jot

What actions do Mary Ann and Denarius take to facilitate effective practice? Jot down what you noticed.

Practice

Note how natural practice is for Mary Ann and Denarius and their teachers: as routine as any other part of the meeting. Rehearsing in this way may feel awkward at first, but when you develop it as an expectation with your teachers, it will quickly become more comfortable for them (and for you!). Build a culture of practice, and practice will happen—and it will change your school.

"Early on, sometimes my teachers would attempt a reteach, but really they'd just be teaching louder," Mary Ann recalls with a laugh. "So we'd have to go back and practice that, and we would have teachers role playing their reteach for each other." That strategy made all the difference. For Denarius, it is the same: practice makes perfect, and Denarius is even able to integrate student culture feedback within the reteaching practice to make it more likely to succeed.

Once you've practiced, it's time to lock in the actions your teachers have prepared to take. Watch how Denarius and Mary Ann both make sure the reteaching happens.

WATCH Clip 13: Stinson—Do It (Follow Up)—Weekly Data Meeting
WATCH Clip 14: Frazier—Do It (Follow Up)—Weekly Data Meeting

Follow Up

At the end of the weekly data meeting, Mary Ann Stinson asks her teachers to list all the action items and to schedule the follow-up. Denarius Frazier works with his teacher to identify multiple opportunities for assessing the identified reteach skill, and they establish a comprehensive timeline for next steps.

Think of the power of what you just witnessed. In thirty minutes, Mary Ann's and Denarius's teaching teams deeply analyzed student work and came up with a concrete reteach plan for a challenging standard. Now multiply that impact by the regular meetings that her teachers have at every grade level across the entire year. These meetings not only impact the assessment items that they directly tackle, but also build the habits of mind for teachers to repeat this process every day with student learning in their classroom. By setting this foundation in place, Mary Ann has truly shifted the focus from the teaching to the learning, and she has raised expectations for everyone in school. Her results tell it all.

Core Idea

Teachers will rise to the level of our expectations:
If we expect them to practice, they will.

On the following pages, we've consolidated all the best practices of weekly data meetings into one precise, packed guide that you can use to lead data meetings yourself.

Weekly Data Meeting

Leading Teacher Teams to Analyze Student Daily Work

Prepare before the meeting	**Prepare**
	• **Materials ready:** identify student exemplar; teachers turn in student work, pull and categorize hi/med/lo student work (just a few of each), pull upcoming lesson plan(s) and pertinent prompting guides • **Prime the pump:** script the reteach plan and the gap in student understanding; unpack the standard • **Preview protocol with teachers:** assign roles, novice teachers speak first, veteran teachers add on and clarify, leader provides additional clarity at end, chart, preview the need for concision from more verbose team members, use of a timer, creation of note-taking template
See It **13–18 min**	**See Past Success, See the Exemplar, and See and Analyze the Gap**
	See past success (1 min): • "Last week we planned to reteach ___, and we went from ___% proficient to ___%. Nice job!" • "What actions did you take to reach this goal?" **See the exemplar (8 min):** • Narrow the focus: "Today, I want to dive into [specific standard] and the following assessment item."

See It **13–18 min**	**See Past Success, See the Exemplar, and See and Analyze the Gap**

	• Interpret the standard(s):
	  ○ "Take 1 min: in your own words, what should a student know or be able to do to show mastery?"
	• Unpack the teacher's written exemplar:
	  ○ "Take 1–2 min to review the exemplar: What were the keys to an ideal answer?"
	  ○ "How does this [part of the exemplar] align with the standard?"
	• Analyze the student exemplar:
	  ○ "Take 1 min: How does your student exemplar compare to the teacher exemplar? Is there a gap?"
	  ○ "Do students have different paths/evidence to demonstrate mastery of the standard?"
	  ○ "Does the student exemplar offer something that your exemplar does not?"
	See the gap (5 min):
	• Move to the sample of unmastered student work (look only at representative sample):
	  ○ "Take 2 min: What are the gaps between the rest of our student work and the exemplar?"
	  ○ "Look back at our chart of the standard and exemplar: What are key misconceptions?"

Name It **2 min**	**State the Error and Conceptual Misunderstanding**

	Punch it—Stamp the error and conceptual understanding:
	• "So our key area to reteach is . . .":
	  ○ Describe the conceptual understanding
	  ○ (If needed) Describe the procedural gap (e.g., memorize multiplication tables) and/or missing habits (e.g., annotating text, showing work)
	• Write down and/or chart the highest-leverage action students will take to close the gap

Do It (Rest of the meeting)	Plan the Reteach, Practice, and Follow Up

	Plan the reteach (8–10 min):
	• Select the reteach structure:
	  ○ "Should we use modeling or guided discourse?" "Why?"
	• Select the task and ID exemplar response:
	  ○ Select materials: task, text, student work to show-call, what to chart.
	  ○ "What is the ideal answer we want to see that will show we've closed the gap?"
	  ○ (If needed—follow-up question): "What is the 'why' that students should be able to articulate?"
	• Plan the reteach:
	  ○ "Take ___ min and write your script. I will do the same so we can spar."
	  ■ **If a model:** write the think-aloud and questions
	  ■ **If guided discourse:** select student work for Show-Call, write prompts
	  ○ "Let's compare our reteach plans. What do you notice? What can we pull from each to make the strongest plan?" (Revise the plan)
	• Plan the independent practice:
	  ○ "What will you monitor to see if they are doing this correctly? What laps will you name?"
	Practice the gap (remaining time):
	• "Let's practice."
	  ○ **If a model:** practice modeling the thinking, precision of language, and change in tone/cadence
	  ○ **If guided discourse:** practice Show-Call, prompting students, and stamping the understanding
	  ○ **If monitoring:** practice the laps, annotations, prompts when students are stuck, or stop the show
	• (If a struggle) "I'm going to model the teaching for you first. [Teach.] What do you notice?"

Do It (Rest of the meeting)	Plan the Reteach, Practice, and Follow Up

	• Repeat until the practice is successful. Check for understanding (CFU): "What made this more effective?"
	• Lock it in: "How did our practice meet or enhance what we planned for the reteach?"
	Follow up (last 2 min):
	• Set the follow-up plan: when to teach, when to reassess, when to revisit this data
	  ○ Observe implementation within 24 hours; teacher sends reassessment data to leader
	• Spiral:
	  ○ ID multiple moments when teacher can continue to assess and track mastery: Do Now questions, homework, modified independent practice
	• Move to the lowest-scoring work:
	  ○ "What students do we need to pull for tutoring? What do we need to remediate?"
	  ○ "How can we adjust our monitoring plan to meet the needs of these students?"

Findings from the Field

Stephen Chiger

I came to data-driven instruction as an unashamed skeptic. "This sounds like another round of teaching to the test," I sniffed, as I begrudgingly shuffled in to a professional development workshop that would wind up changing the course of my professional life.

I'd been teaching in an urban high school for four years, and my idealism, while not extinguished, had begun to seriously sag under the weight of some questions that most teachers in underresourced communities face. How could I teach well when my students came to me at so many disparate levels? If my students' primary school education had been inadequate, was it too late to change anything by the time they

were in high school? And even if I could run my class effectively, were the systemic expectations so low—and the drag of poverty so high—that my efforts comprised little more than blowing against the wind?

Suffice it to say, something happened during the course of that PD that altered how I saw education. I read the case studies of schools who had turned around student achievement. I analyzed student data and saw the kinds of insights it provided about learning. I thought of my students—of Zakiyyah, of Dawanna, of Porsalin and Paul and Gwen. Didn't I owe it to them to push myself and my school?

After hearing a segment on using assessments to improve literacy, I called the facilitator over.

"This sounds great," I said. "But this isn't how my department teaches English. We teach poems, we teach stories, we teach the five-paragraph essay."

"Well," the facilitator said, "it's not about which poem or story you teach; it's about how you teach it, assess it, and reteach it. That's what you need to rethink."

I still remember what I was thinking in that moment. First, I thought that this was an incredibly intimidating and outrageous thing to say. Second, I thought that it was exactly right. If we designed tests to measure student literacy, and if we set the rigor of those tests to match what we knew would be true college preparation, we could keep our curriculum focused on the material that really mattered—not just the idiosyncratic whims of the moment. We could, with the backbone of a data-driven program in place, transplant a refreshed academic vision, one to which all of us would be aligned.

A data-driven program wouldn't be teaching to the test; we'd be teaching to the *kids*. More specially, we'd be teaching to their needs because we'd know—precisely—what they were.

Now an instructional leader myself, I try to pay forward the wisdom I learned that day and from many inspiring leaders since. I prepare for data meetings with attentiveness and zeal. I analyze my teachers' data with the same alacrity I want them to apply. And I try to meet people wherever they are—whether new or experienced, struggling or masterful—so that together we can find the right answers for our students, by analyzing one question at a time.

MAKING IT WORK: HOW IT FITS INTO A LEADER'S SCHEDULE

All the data meetings that we just watched were highly impressive. However, such meetings won't have value if they happen only once a year. The second key system to making data-driven instruction work is a calendar that locks all of it in.

Yearly Calendar—Data-Driven Instruction

To make data-driven instruction work, it has to be the prominent lever in your yearly calendar. That entails first scheduling all key tasks related to it, and then building the rest of your calendar. "Data-Driven Instruction Monthly Map" is a sample template that is built on the experience thousands of schools, laying out all the prework and implementation work that will set you up to succeed. Feel free to take and adjust it to the needs of your own school.

Data-Driven Instruction Monthly Map

Key Tasks for the Year

Note: 1 represents the first week of the month, 2 is the second week of the month, and so on.

Month	Task
June	☐ 1 – Develop interim assessment calendar (IAs, analysis, reteach, PD) ☐ 1 – (If needed) Acquire/revise/develop interim assessments
July (summer tasks)	☐ 1 – (If new leader) Grade school using the DDI implementation rubric to ID where the school stands and where you need to be before the school year begins ☐ 1 – (If needed) Change curriculum scope and sequences to match interim assessments that will be used (or vice versa) ☐ 1 – ID who will help you complete the assessment/curriculum adjustment process to be ready for launch by the beginning of the school year
August	☐ 3 – Present DDI PD session to new teachers (use materials from *Get Better Faster* and *Driven by Data*) ☐ 4 – First week of school
September	☐ 2 – Have the first round of interim assessments (or the closest proxy) finalized

	☐ 2 – First interim assessments (or the closest proxy) have already been seen by the teachers (transparency) so that they can plan for mastery ☐ 4 – Develop plan to determine how test scoring and analysis will be completed
October	☐ 1 – Have teachers predict performance on interim assessment 1 • Mark each question: "confident" (sure that the students will get it right), "not sure," and "no way" (students will definitely get it wrong) ☐ 2 – Interim assessment 1 ☐ 2 – Deliver PD to school's instructional leaders in DDI analysis and leading analysis meetings (use *Get Better Faster* and *Driven by Data* for PD agenda, materials, and resources) ☐ 3 – Teacher Analysis and Action Plan Template are in place ☐ 3 – Teachers complete Assessment Analysis Instructional Plans ☐ 3 – Instructional leaders run test-in-hand analysis meetings with teachers • Compare performance to what the teacher predicted: highlight areas of discrepancy (i.e., teacher over-/underpredicted how well the students were going to do on certain test questions) • Follow one-pager: Weekly Data Meeting ☐ 3 – Principal observes analysis meetings, giving feedback to instructional leaders about their facilitation ☐ 4 – Staff PD: • Conduct results meeting to plan to reteach challenging standards • Have teachers add rigor to their lessons using the rigor action steps from the Get Better Faster Scope and Sequence
November	☐ 1 – Second assessment is in the hands of the teachers so that they can plan to teach for mastery

	☐ 2 – Review lesson plans: Is there evidence of implementation of Teacher Action Plans from the assessment analysis meeting? ☐ 2 – Observe classes: Is there evidence of implementation of Teacher Action Plans and changed teaching practices? ☐ 2 – Evaluate school on DDI implementation rubric ☐ 3 – Have teachers predict performance on second interim assessment • Mark each question: "confident" (sure that the students will get it right), "not sure," and "no way" (students will definitely get it wrong)
December	☐ 1 – Interim assessment 2 ☐ 2 – Teachers complete data entry, analysis, and action plan ☐ 2 – Principal leads, observes, or models analysis meetings for instructional leaders ☐ 2 – Teachers complete Assessment Analysis Instructional Plans ☐ 3 – Staff PD: conduct results meeting to plan to reteach challenging standards
January	☐ 1 – Third assessment is in the hands of the teachers to plan for mastery
February	☐ 1 – (If needed) Follow-up PD for school leaders to improve analysis meetings ☐ 1 – Interim assessment 3 ☐ 2 – Teachers complete Assessment Analysis Instructional Plans ☐ 2 – Data analysis and analysis meetings ☐ 3 – Staff PD: conduct results meeting to plan to reteach challenging standards
March	☐ 4 – Interim assessment 4
April	☐ 1 – Teachers complete Assessment Analysis Instructional Plans

	☐ 1 – Interim assessment analysis meetings ☐ 2 – Staff PD: conduct results meeting to plan to reteach challenging standards
May	☐ 1 – State tests ☐ 2 – State tests
June	☐ 3 – Final performance tasks ☐ 4 – Last week of school

Weekly Schedule—Week of Interim Assessments

With the yearly calendar in place, you can lock in effective interim assessments. This sample high school schedule includes what to do during the weeks of interim assessments. (You can find elementary and middle school samples on the DVD accompanying this book.)

Interim Assessment (IA) Week Schedule—Sample

IA Week	Monday	Tuesday	Wednesday	Thursday	Friday
Morning	Literacy IA*	Math IA	Science IA	History IA	Spanish and Art IAs
Prep periods/ afternoon	Literacy teachers grade IAs	Math/literacy teachers grade IAs	Everyone grades IAs	Faculty mtg: cancel—give time to fill out analysis templates and action plans	Half-day PD (or 2nd wk)** Either: results meetings by grade level or department Or: Ind. creation of action plans
Week post-IA	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
Classes	Reteach	Reteach	Reteach	Reteach	Reteach
Prep periods	One-on-one analysis meetings: literacy	One-on-one analysis meetings: math/science			Half-day PD (or 1st wk)** See row above

* Literacy assessments come first because they normally involve the most amount of essay grading, which takes longer.
** Half-day PD sessions are scheduled for the week of the assessments or the week after. This allows for time to complete analysis and action plans and to offer targeted PD to meet the student learning needs.

Weekly Schedule—Rest of the Year

Mary Ann also locks in regular data meetings through the year as a part of the standing grade-level team meetings.

Scheduling Weekly Data Meetings

Regular Week	Monday	Tuesday	Wednesday	Thursday	Friday
Teachers	Prep period: grade-level weekly data meetings	Teach new standards and spiral	Reteach key standard	Teach new standards and spiral	Teach new standards and spiral
Leadership team	Attend weekly data meetings (one leader per meeting)	Leadership team mtg: ID patterns from meetings and what to observe	Observe reteaching	Observe reteaching	

TURNAROUND—DDI IS THE STRATEGY

As noted in our Introduction, building a strong, data-driven foundation is one of the super-levers for schools looking for dramatic transformation. What are the first steps a leader can take to put this into action in a school that is struggling?

In all the other chapters, you'll find coping mechanisms and shortcuts to work through a challenging situation. In this chapter, by contrast, data-driven instruction *is* the turnaround strategy. This is the lever that will jump-start student learning, right alongside student culture. Your task is quite direct: take the monthly action plan ("Data-Driven Instruction Monthly Map") and adjust it to meet your school's yearly calendar. You need to implement each one of the action steps listed, but you can do so at the time that works for you within the framework given here. The best additional advice leaders like Mary Ann offer is to remove as many other initiatives and projects as possible to keep yourself singularly focused on making this work. Too often we take on more than we can handle, and nowhere is this more the case than in turnaround situations. Keep it simple: use this chapter as your prominent guide.

In the DVD that accompanies this book, you have the highest-leverage handouts for use with data-driven instruction. Access a full menu of PD materials in *Driven by Data*. You do not need to reinvent the wheel here: the work has been done successfully by hundreds of schools across the country. You can simply follow their example.

CONCLUSION

Mary Ann was up front with her staff during her first year leading Truesdell Education Campus: this year was not going to be easy. She recalled the initial reaction: "It was this way or the highway, and some chose the highway."

But the teachers quickly learned that they had more than an ambitious, passionate leader in Mary Ann—they had an ally. And this ally had a plan. "My role as principal was clear in my mind instructionally," Mary Ann says. "Using data to lead was absolutely life-changing. I got to have deep conversations with my teachers about their work. The more we perfected the analysis cycle, the more I didn't need to be the one in the classroom to make sure the reteach went well."

The teachers didn't need to buy into Mary Ann's mission in some abstract way: they got to see how much more their students learned. As mentioned in *Driven by Data,* when properly implemented, data-driven instruction does not require teacher buy-in—it creates it. With Mary Ann at the helm, teachers used the time available to them in a way that turned around the educational experience of every child at Truesdell. They didn't do it by magic: they did it by finding out what their students needed, and giving it to them unfailingly. That's the power of data-driven instruction.

Action Steps for Principals

Data-Driven Instruction

Lever	Key Actions in Sequence
Data-Driven Instruction	**Plan**

Assessments and Curriculum—Align the Rigor

1. **Lock in quality interim assessments:**
   - ID the end-goal assessment (state test, college entrance exam, college assessment) that exemplifies what successful students should know and be able to do.
   - ID essential content and rigor that students must master for success on end-goal assessment.
   - Acquire or develop effective interim assessments (IAs) that are aligned to end-goal assessments.
   - Develop a common IA calendar that identifies when IAs will take place, who and what will be assessed, and when IA data analysis meetings will take place.
2. **Lock in high-quality lesson plans and curriculum materials that align to the assessments:**
   - See "Action Steps for Principals: Planning" for details.

Data Meetings—Tools and Structures for Weekly Data/IA Meetings

3. **Establish essential data meeting structures that result in evidence-based action planning:**
   - Create meeting schedule to conduct data meetings to analyze IA data (every 6 weeks) and to conduct weekly data meetings (WDMs).
   - Establish consistent protocols and prework expectations for effective analysis meetings (e.g., IA analysis meeting protocol, WDM analysis protocol).
   - Develop a system to regularly collect high, medium, and low samples of student work (e.g., Exit Tickets, spiral review) to use as evidence to ID trends in student learning.
4. **Create effective principal monitoring tools for all post-assessment action plans, including:**

Lever	Key Actions in Sequence
Data-Driven Instruction	**Plan**
	• Develop an action plan tracker that identifies teacher reteach goals, timeline, and focus area. • Create systems to have access to assessments and/or DDI action plan when observing. • Create observation schedules to observe teachers in reteaching implementation.
	Roll Out
	PD on Data-Driven Instruction (DDI) 5. **Roll out PD for data-driven instruction:** • Plan and roll out PD on DDI, the power of the question, and writing exemplars. • Develop and roll out exemplar IA analysis to set clear expectations for teacher analysis. • Create repeated opportunities during PD to practice analyzing student data/work and creating 6-week action plans (IAs) or targeted reteach plans (WDM).
	Execute
	Analyze for Trends 6. **Conduct a deep analysis of the data to ID school-wide and teacher-specific trends:** • Find the overall trend. o For IAs: ID school-wide patterns in the data: outlier teachers and students (low and high) and key standards that need focus. o For WDMs: review the student work to select the highest-leverage standards or question to focus on for analysis. • ID the key conceptual understanding and error for a given standard or task. o Determine what students should be able to do and say to demonstrate mastery of the standard or task. o ID the key gap between the ideal response and student work: both the key procedural errors and conceptual misunderstandings.

Lever	Key Actions in Sequence
Data-Driven Instruction	**Execute**

- Determine the highest-leverage action steps to take to close the gap.

Data Meetings—Lead Effective Weekly Data and IA Analysis Meetings with Teachers

7. **Prepare:**
   - Narrow your focus: pick the assessment item and student work in advance that highlight key errors.
   - Prepare the exemplar and write your meeting script to ensure an effective, efficient meeting.
8. **See It:**
   - Start with the standard(s): unpack the key parts of the standard that align to the student error to ID the most essential conceptual understandings that students must master.
   - Unpack the teacher and student exemplars (or rubrics) to ID how the work demonstrates mastery of the standard.
9. **Name It:**
   - Punch it: succinctly restate the key procedural errors and conceptual misunderstandings, then have the teacher repeat them and write them down.
10. **Do It:**
    - Perfect the plan before you practice.
      - Plan the structure of the reteach: modeling or guided discourse.
      - ID the steps, student materials, and students to monitor.
      - Predict the gap: anticipate likely errors in execution and practice that part of the meeting.
    - Practice the gap.
      - ID the most essential elements of the reteach for the teacher to practice, especially the parts that will be hardest to master.
      - Prompt the teacher to "go live" and practice the prompts that will be used during the reteach.

Lever	Key Actions in Sequence
Data-Driven Instruction	**Execute**

	• Build an effective follow-up plan.
	  ○ ID when to teach, when to reassess, and when to revisit this data.
	  ○ Embed the action plan into upcoming lessons and unit plans.
	  ○ ID when observations will take place to see the plan in action and how it will be assessed.

	Monitor and Follow Up

	11. **Actively monitor implementation of action plans:**
	• Observe the reteach.
	  ○ Start from the exemplar teacher and observe same-subject teachers back-to-back.
	  ○ ID the gap between the exemplar teacher and other teachers.
	  ○ ID the gap between the original plan and execution and between student work and exemplar.
	• Observe weekly data meetings (WDMs) of other instructional leaders (live or via video).
	  ○ ID the patterns across meetings and the key areas of growth for the leader's facilitation.
	• Track implementation of 6-week action plans and student outcomes following reteach.
	  ○ Have teacher post lesson plans and/or 6-week action plans in the classroom to be able to observe both the plan and the execution to ID gaps.
	• Create system for teacher teams to collect student work between WDMs.
	12. **Monitor student work in each class using a sequence:**
	• (A) pen-to-paper, (B) annotations/strategies, and (C) right answers

Data-Driven Instruction and Assessment Implementation Rubric

The rubric is intended to be used to assess the present state of data-driven instruction and assessment in a school. The rubric specifically targets interim assessments and the key levers leading to increased student achievement.

4 = Exemplary implementation; 3 = Proficient implementation; 2 = Beginning implementation; 1 = No implementation

Data-Driven Culture	
1. **Highly active leadership team.** Facilitate teacher-leader data analysis meetings after each interim assessment and maintain focus on the process throughout the year.	/4
2. **Introductory professional development.** Teachers and leaders are effectively introduced to data-driven instruction—they understand how interim assessments define rigor, and experience the process of analyzing results and adapting instruction.	/4
3. **Implementation calendar.** Begin school year with a detailed calendar that includes time for assessment creation/adaptation, implementation, analysis, planning meetings, and reteaching (flexible enough to accommodate district changes/mandates).	/4
4. **Ongoing professional development.** PD calendar is aligned with data-driven instructional plan: includes modeling assessment analysis and action planning and is flexible to adapt to student learning needs.	/4
5. **Build by borrowing.** Identify and implement best practices from high-achieving teachers and schools: visit schools/classrooms, share and disseminate resources/strategies.	/4
Assessments	
1. **Common interim assessments** 4–6 times/year.	/4
2. **Transparent starting point.** Teachers see the assessments at the beginning of each cycle; assessments define the road map for teaching.	/4
3. **Aligned to state tests and college readiness.**	/4

4. **Aligned to instructional sequence** of clearly defined grade-level and content expectations.	/4
5. **Reassess** previously taught standards.	/4
Analysis	
1. **Immediate turnaround** of assessment results (ideally 48 hrs).	/4
2. **User-friendly, succinct data reports** include: item-level analysis, standards-level analysis, and bottom-line results.	/4
3. **Teacher-owned analysis** facilitated by effective leadership preparation.	/4
4. **Test-in-hand analysis** between teacher(s) and instructional leader.	/4
5. **Deep:** moves beyond *what* students got wrong and answers *why* they got it wrong.	/4
Action	
1. **Reteach.** Use guided discourse or modeling strategies to reteach difficult standards.	/4
2. **Six-week action plans.** Execute plans that include whole-class instruction, small groups, tutorials, and before- and after-school supports.	/4
3. **Ongoing assessment.** Check for understanding every day: aggressive monitoring of independent work, questioning, and in-class assessments to ensure student progress between interim assessments.	/4
4. **Follow up.** Instructional leaders review lesson and unit plans and give observation feedback driven by the action plan and student learning needs.	/4
5. **Engaged students** know the end goal, how they did, and what actions they are taking to improve.	/4
TOTAL:	**/100**

Stop Here

Take a moment and use the Data-Driven Instruction and Assessment Implementation Rubric to evaluate your school. Then follow the steps here:

If your school scored below 70 on the DDI rubric:

As mentioned in the Introduction, data-driven instruction is the super-lever without which none of the other instructional levers work effectively. **If you don't think your school is proficient on this DDI rubric (a score above 70), then this chapter should remain your primary focus for instruction. Then skip ahead to Chapter 5 to implement the other super-lever, Student Culture.** Although you can implement the other instructional levers as well, don't launch anything that will prohibit your ability to implement DDI and student culture proficiently. *Driven by Data* is a great additional resource, as it includes all the PD materials and tools you need to launch this effectively in your school.

If your school scored above 70 on the DDI rubric:

Option 1: skip to Observation and Feedback (Chapter 3) and then Student Culture (Chapter 5). After data-driven instruction and student culture, observation and feedback is the next most important lever and would be the next best to lock in place.

Option 2: read the chapters in order—Planning, Observation and Feedback, and Professional Development (Chapters 2–4) and then the Culture lever. Planning is a lever that ties completely to data-driven instruction, as it sets you up to have effective curriculum, unit, and lesson plans to teach more effectively. Observation and Feedback and Professional Development give you additional tools to make teachers better and can support your drive from good to great.[15]

Pulling the Lever

Action Planning Worksheet for DATA-DRIVEN INSTRUCTION

Self-Assessment

- Assess your school on the Data-Driven Instruction and Assessment Implementation Rubric. What is your score? ___/100
- What items on the rubric are your biggest areas for improvement?

Planning for Action

- What tools from this book will you use to develop data-driven instruction at your school? Check all that you will use (you can find all on the DVD):
  - ☐ Data-Driven Instruction and Assessment Implementation Rubric
  - ☐ Weekly Data Meeting one-pager
  - ☐ Assessment Results Template
  - ☐ Teacher Analysis and Action Plan Template
  - ☐ Reteaching one-pager
  - ☐ Action—Follow-Up Accountability Measures
  - ☐ Interim Assessment Calendars—elementary, middle, and high school
  - ☐ Data-Driven Instruction Monthly Map
    Note: Additional data-driven instruction PD materials can be found in *Driven by Data.*
- What are your next steps for launching data-driven instruction?

Action	Date