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Digging into classroom data

By Anthony Armstrong

“**T**here is a shift occurring,” said Jenni Iwanski, instructional support coach for Norton Creek Elementary in West Chicago, Ill., “from a focus on teaching to becoming focused on exactly what the students are learning. Teachers really do understand and know their students, but sometimes we tend to overgeneralize how our students are doing and are not objective about what students can do. But when we have the data, they give us a clear picture.”

The availability of student assessment data has increased rapidly over the last decade, especially at state and district levels. While most teachers understand the value of using data to guide instruction, knowing exactly how to use

data at the classroom level is a challenge in many schools. Fortunately, teacher leaders and coaches can address this challenge by helping teachers become accustomed to the process of identifying the right data to gather and overcoming the barriers to taking action.

GET THE RIGHT DATA

Teachers at Norton Creek Elementary started looking at data to help struggling students four years ago. Two years later, the entire school was caught by surprise when less than 50% of the students passed the state writing test. “We were a high-achieving district and school,” said Iwanski. “Ninety percent of our kids passed their reading test, and

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97% passed the math, so I knew something was off."

The teachers at Norton Creek thought they were looking at the right data to guide their instruction, but they quickly realized that they had not looked closely enough at the type of data they were collecting.

"We were collecting data on students after they completed a writing process, after they had conferred with their teachers and used other resources to help them get to their final product," explained Iwanski. "But when it came to how well they do when writing independently, we didn't have a clear picture until we got the test results back and found out that our kids were not really strong, independent writers. We had to back up and change the type of data we were collecting and how we used that data."

After determining that they needed to collect data on the skills students would use as independent writers, Iwanski worked with the teachers to identify targeted writing process skills, and began assessing those specific skills more frequently. Within the year, Norton Creek doubled the number of students passing the writing test.

For Katie Johnson, a middle-level math coach for Fargo (N.D.) Public Schools, finding the right data starts with examining districtwide assessments. "Our teachers take a unit and look for three or four important learning targets that they want students to master before moving on. The teachers then design assessments based on a manageable number of targets. Classroom-based common assessments are an easy way to start working with data because they are teacher-created and something the teachers can relate to."

During the examination process, Johnson found it helpful to create a template to help keep the teachers focused. "It can easily become a conversation about nothing that can be solved," said Johnson, "so I created a template to refocus the conversation back to the standard, objectives, and what we can do with kids and how that will impact their future."

"Using data can be very confusing," said Monica Boehle, instructional support coach and U.S. history teacher for Saint Charles North High School in Saint Charles, Ill. She noted that the teacher-coach partnership and the professional learning community were the most effective environments for building data-use knowledge. "As a department, we sometimes do presentations and then go to individual teachers to tie the data to their own needs," she said.

Boehle also stresses the importance of making sure that teachers know how to measure and collect data that are realistic and usable. "Once in our history learning community, before I started coaching," said Boehle, "we created random assignments to measure a skill, but no one taught the lesson

the same way or gave students the same directions for the assessment, so the data were meaningless. In addition, we all agreed on the skill to measure, but it turned out the skill was not important to the program." Boehle noted that staff felt frustration when they saw the results. "We realized that it doesn't help student learning if we are measuring something that doesn't impact learning in class the next day or the next week. We realized that before we decide which skill to measure, we have to make sure it is relevant to the essential seeds of the unit. That realization came through some very hard conversations. Now, as a coach, I help guide people through those conversations," she said.

Even teachers who seem to buy in to data-driven instruction can fall into the trap of thinking that data collection means intrusive standardized testing that interrupts the teaching process. Other times, particular class instructors are challenged to find ways to formatively assess their students.

"Since we required all of our faculty to gather formative assessment data," said Iwanski, "our specials teachers came up with creative ways to formatively assess the students. For example, part of the physical fitness test that students have to take every year is the push-up. Our coach knew that this was the one skill that most students did poorly on, so she came up with a creative way to formatively assess student push-ups. She set up stations where the kids would complete various activities. One of those stations was the push-up, so she could watch each individual student at that station and record his or her level of skill while all of the other students were busy completing activities at the other stations." The instructor also started having the students self-assess, which made them more aware of their form and technique. This new level of awareness and more frequent assessments led to students assisting each other, offering advice on form, giving each other encouragement, and getting excited about a required skill that they used to dread.

Sharing assessment results with students is something that Boehle encourages. "Teachers can show the assessment results to students and talk with them about their individual scores and how to overcome their weaknesses. I've been using this technique in my classes and the students find it empowering. The response has been overwhelmingly positive. Students understand where they need to go, and my feedback for them is much more specific and targeted because I know that if I can't articulate where they need to go, then there is no way they will get there — it becomes a guessing game. I have several at-risk students whose goal is to do better, but they don't know how. Sharing their assessment results gives them a concrete progression instead of making them feel overwhelmed."

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Jenni Iwanski



Monica Boehle

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TO TAKE ACTION, REMOVE THE BARRIERS

Even with the right data to examine, many teachers are still uncomfortable with using data to take action or help guide instructional practices.

"Some groups get into thinking that the data will guide their practices for next year," said Boehle. "Even when they are conducting a lot of reflection over the data, if the teachers stops there, nothing changes."

"For example," Boehle continued, "Pacing guides only allow so many days to cover a unit, so sometimes the teachers are not sure what to do when they need to go back and revisit part of that unit."

Boehle recommends guiding teachers to creatively respond to this challenge by, for example, finding ways to reinforce difficult student skills in new content to keep up with the required pace. "If it is a content issue," adds Boehle, "it might require a frank conversation with the learning community to determine if the instructor should get behind in pacing to revisit the content."

"The biggest obstacle to overcome when showing teachers how to look at data is to help them not take it personally, to look at the data objectively," said Johnson. "You have to show them you are not using the data to judge. You have to show them how you are just looking to determine

where students are and how to bridge the gap to where they need to be. You always have to reinforce the goal of student success."

Johnson also takes care to make sure teachers are not overwhelmed when they start looking at the data. Knowledge of how to interpret, organize, and present the data in ways that are usable and understandable for teachers is critical, she says. "The first reports were computer-generated and had so many choices it was difficult to know which data to look at and where to start. I had to fine-tune the reports by going through the data myself and using my teaching background to find out which data were helpful."

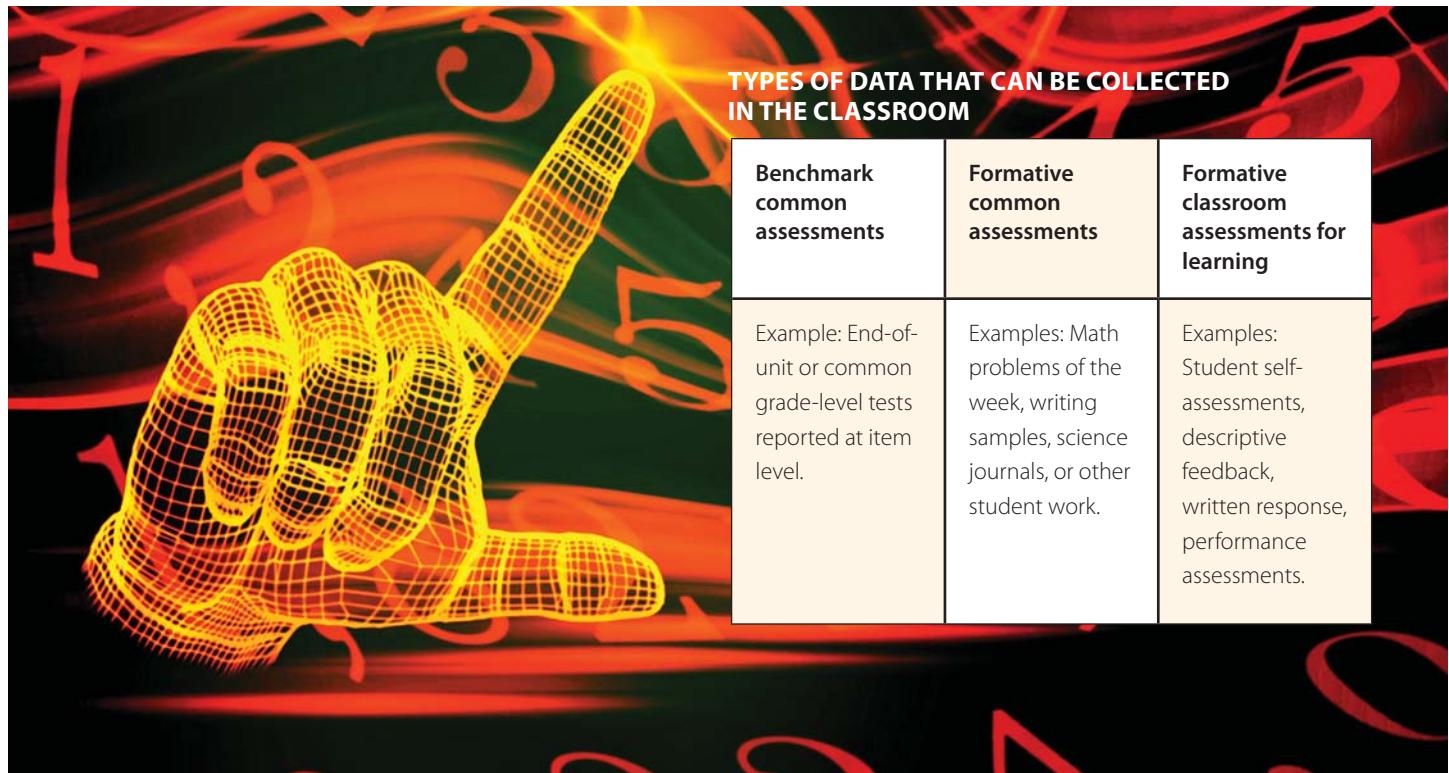
Iwanski encourages coaches to establish the right culture for data discussions. "If we don't make a safe environment to look at data and how they can improve instruction, we are missing a huge opportunity for teachers."

To help create a safe environment, Iwanski uses norms to establish agreements in advance among her and the teachers (see the tool for establishing norms on p. 6). She then uses questions and paraphrasing to encourage teachers to take ownership of the data and talk about what they

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Learning Forward **BELIEF**

Student learning increases when educators reflect on professional practice and student progress.



Source: Adapted from Love, N. (ed.) (2009). *Using data to improve learning for all: A collaborative inquiry approach*. Thousand Oaks, CA: Corwin Press.

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reveal, including what is working for the students.

"Data can be scary," said Iwanski. "They can reaffirm or point out our weaknesses and make us face the hard realities. It is hard to realize that we are not doing what we are supposed to do. To make the data work for teachers, we have to make sure they keep ownership of the data and the directions they want to take to improve student learning."

Boosting teacher confidence and interest in using data is important for preventing resistance, says Iwanski. To achieve this, she ensures that teachers are learning something that they can take back to their classrooms in all professional development.

Boehle suggests coaches use qualitative adjectives when describing data to make the term more palatable and help soothe faculty fears. "You can describe data as 'observational

data' or 'student exit slip data' to make them less intimidating," said Boehle. "Qualify the type of data so teachers understand that they can take different forms. Are they summative, formative, or 'five multiple-choice questions on the math concept? Get more specific so the teachers see that data don't have to be a final exam or big project. Teachers often don't realize how much data they have at their ready. Data don't have to be spreadsheets. Teachers can collect exit slips and divide them into three different piles to determine who needs more help, who got it, and who needs to be challenged more. It is the coach that guides them through this. Teachers know a lot about their students but don't realize that knowledge is data."

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Anthony Armstrong (anthony.armstrong@learningforward.org) is publications editor at Learning Forward. 

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BUSINESS OFFICE

504 S. Locust St.
Oxford OH 45056
513-523-6029
800-727-7288
Fax: 513-523-0638
office@learningforward.org
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