

MIX IT UP



Variety is key
to a
well-rounded
data-analysis
plan

BY LOIS BROWN EASTON

Variety may be the spice of life, but in terms of data sources, variety is more than a spice — it’s one of the basic food groups. Alternative data sources, such as student interviews and walk-throughs, are essential for a well-balanced diet. Data from test scores alone, whether from norm-referenced or criterion-referenced tests, state, dis-

trict, or school tests, may provide protein, for example, but other data sources help keep educators, schools, districts, and states healthy.

Many data-analysis experts advo-

cate for gathering evidence that complements student achievement data. Victoria Bernhardt (2008) recommends that achievement data be coordinated with demographic, perception

LOIS BROWN EASTON is a consultant, coach, and author. She is the retired director of professional development at Eagle Rock School and Professional Development Center, Estes Park, Colo. She is the editor of *Powerful Designs for Professional Learning*, 2nd Edition (NSDC, 2008). You can contact her at leastoners@aol.com.

(survey), and school process data (what the school does to help students learn — after-school tutoring and small classes, for example). In terms of student achievement data, Bernhardt and others (Love, Stiles, Mundry, & DiRanna, 2008) advise educators to collect a variety of data, including student work itself. Several strategies for powerful professional learning can help schools, districts, and states access achievement data from sources other than test scores. Other strategies can help educators collect process data.

SOURCES FOR EVIDENCE OF STUDENT ACHIEVEMENT

ACCESSING STUDENT VOICES

Harvetta Robertson and Shirley Hord make the point that educators often access last the voices they should access first (2008). Facilitators of task forces focused on school improvement seek systemwide representation, but don't often ask students — those in the system who will be most affected by the results of school improvement efforts — to participate in the work. One way to access student voices is through focus groups. Another is through interviews.

FOCUS GROUPS

Robertson and Hord describe a focus group consisting of 9th-grade students whose actions frustrated their teachers. “Nothing seemed to help,” said one teacher. “I found myself questioning whether my choice to teach was a good one” (2008). These teachers

learned during a focus group that the transition from middle to high school had challenged these students: “While

For more strategies

The expanded second edition of *Powerful Designs for Professional Learning* introduces new chapters on classroom walk-throughs, differentiated coaching, dialogue, and video. The book includes a CD with more than 270 pages of handouts, including the tool in this issue of *JSD* on p. 64. Order the book from the NSDC Online Bookstore, <http://store.nsd.org>. Item #B380, \$64 for members, \$80 for nonmembers.



- Why is math such an important subject?
- Was there a lesson that stood out for you?
- What outside influences might affect your ability to do math?
- What do you do if you don't know how to solve a problem?
- Do you see any math application in your future?
- What do teachers do that embarrass you?

Their answers were surprising, validating, disconcerting, and sometimes even funny, such as this response from a young man: “Actually,” he said, “my gerbil influences me to do my math homework — it's the only time I'm sitting in front of its cage.”

At the end of the focus group, students turned their chairs around and chatted in small groups with two or three educators. The ice had been broken, and students were completely candid as educators asked important follow-up questions. The facilitator wrote up the results for everybody.

INTERVIEWS

Interviews differ from focus groups in that they occur between one interviewer and one student at a time. Robertson and Hord describe the use of an interview protocol called “Me, Myself, and I” from the Northwest Regional Education Laboratory (Laboratory Network Program, 2000). Outside interviewers conducted the interviews, collecting data from a representative sample of students from across the student body. The interviewers collated their notes and compiled “some insights for staff to consider about their students' perceptions.”

In a variation on the interview process, educators in Lawrence, N.J., worked with middle school students on how they think about mathematics. These students in pairs did “think-alouds” as they worked

they [the teachers] had been lamenting the freshmen's failure to plan, missing deadlines, and lack of ability to balance school with work and extracurricular activities, the students were trying to assimilate the conditions of expectations of high school with their limited experiences in middle school” (2008). The 9th-grade teachers emerged from that focus group with new ideas on how to help students with transition from middle school and beyond.

Egg Harbor City School District in New Jersey hosted a focus group for three schools engaged in middle school mathematics reform. About 20 middle school students joined the educators in their workshop. Students were briefed to be honest and sincere about their experiences in mathematics, and they were. They sat in a circle outside of which sat the educators. The facilitator asked students questions the educators had generated:

- What skills would have helped you be better prepared for Algebra I?
- Why is it OK to say “I can't do math” when it's not OK to say that about reading?

Facilitators of task forces focused on school improvement seek systemwide representation, but don't often ask students — those in the system who will be most affected by the results of school improvement efforts — to participate in the work.

through increasingly more difficult mathematics problems while the teachers listened in. The teachers summarized their notes in answer to these questions:

- What surprised you about students' thinking?
- What errors did you encounter that may have been based on erroneous expectations or assumptions?
- What novel/unique ways of thinking did you encounter?
- What does this experience tell us about what students know and do not know and what they can and cannot do?

TUNING PROTOCOLS

Looking directly at student work gained credibility in the 1970s and 1980s when the National Writers Project (NWP) and others developed processes for assessing writing. These processes were considered valid — they measured real writing, not a proxy, as in multiple-choice items — and reliable — scorers set and used anchors, established rubrics, and scored each paper at least twice to get interscorer reliability. Tuning protocols in part arose from NWP work on formal, large-scale writing assessment. Tuning protocols are as valid as a formal, large-scale assessment process, though less reliable because they rely on consensus rather than calibration.

Tuning protocols engage a group of peer educators in a process to fine-tune what happens in classrooms based on student work. Dave, a high school science teacher, worked with his peers to tune student science portfolios. He wanted to be sure students thought deeply about science. His tuning group pointed out that students mostly wrote about what they did, not what they learned. The consensus of the tuning group was that Dave needed to modify what he asked students to talk about when they debriefed science activities so that

they could, in turn, write more about what they learned. Dave used their advice and found that students grew so accustomed to talking about their learning orally that they naturally wrote about their learning in their portfolios. He was delighted to discover that their learning sometimes consisted of more questions than answers.

The result of tuning protocols becomes more meaningful if there is a goal, such as looking at how students demonstrate higher-level thinking skills. Over time and after tuning several pieces of student work, educators will have data that can be used to capture students' levels of thinking. Looking directly at student work through a tuning protocol allows educators to know what students actually know and can do rather than how they select answers on a multiple-choice test.

SOURCES FOR SCHOOL PROCESS DATA

CLASSROOM WALK-THROUGHS

Classroom walk-throughs can yield data about student achievement but are also useful for collecting process data. Process data are essential because they establish what schools are doing to help students learn. In a data-driven dialogue, educators look first at achievement data and then ask: "What are we doing at our school to help students succeed on this skill?"

During the typical classroom walk-through, educators focus on the following: student orientation to work, curriculum moves (content, objectives, context, cognitive type, and calibration to district/state curriculum), and instructional moves. According to Carolyn Downey, educators can also use walk-throughs to gather information on safety and health as well as school or district goals (Downey, 2008).

Many educators "walk the walls" during classroom walk-throughs. As part of their walk-through process, they look at what is posted on classroom walls. They can look at posted student work and gauge what students know and can do from what's on the walls. Sometimes, those doing walk-throughs can — as unobtrusively as possible — look at what students are working on at their desks, again gaining information about what students know and can do.

Margery Ginsberg suggests that those who do walk-throughs consolidate their notes over a period of time to share with an entire faculty (Ginsberg, 2004). For example, they might report that during their visits to classrooms, they observed student work showing a deep understanding of a schoolwide focus, such as five-step problem solving. They might observe students engaged in peer-editing groups and making substantive remarks about organization. Or, they might see students working at their desks using longitude and latitude to determine world locations. These data are as important as test score data about mathematics, writing, and geography.

In terms of school process data, walk-throughs can yield information about student grouping, older students tutoring younger students, class sizes, celebrations of student work, consistent classroom management strategies, whether teachers share rubrics in advance of student work, and how teacher aides work with special needs students in the classroom.

SHADOWING STUDENTS

Shadowing students is an important way to gain process data about a

Classroom walk-throughs can yield data about student achievement but are also useful for collecting process data. Process data are essential because they establish what schools are doing to help students learn.

school. Educators who shadow in their own schools are often amazed at what students endure. For the first time, perhaps, they notice the disconnect among the classes or the variety of classroom expectations that challenge students as they move from class to class. Educators who shadow in other schools can do so for particular purposes, such as to see how a school achieves an interdisciplinary curriculum, but their experience will also help them think about the processes of their own school in comparison to the host school's processes.

The school hosting educators who shadow students needs those adults to report what they see and hear. By doing so, the school benefits from a mirror held up to its own processes. The questions and comments that the adults make to students and staff in a host school are an important source of information about how the school is engaging its learners.

CRITICAL ASPECTS

These professional learning strategies yield little in terms of data collection unless those engaged in them use what they have learned. Participating educators need to note the results of these activities and look for themes, trends, and anomalies to report to the entire school faculty. Mary Dietz suggests that groups keep a portfolio of artifacts related to professional learning — notes from meetings, agendas, student work, summaries of learning, and how educators are applying and implementing what they have learned (Dietz, 2008).

In addition, educators should seek ways to make data they are gathering accessible to others, perhaps through a

web site or blog. Principals might want to set aside part of each faculty meeting for groups to report to each other what they have learned. In fact, student achievement or process data from these professional learning experiences can lead a faculty to the process of inquiry that Carolyn Downey and others suggest. An inquiry question based on data from a classroom walk-through, for example, might sound like this: “When planning units through which we want students to help each other learn, how do we decide on strategies for group work that engage all students?” (Downey, 2008). Faculty engaged in an inquiry question can extend learning beyond the professional learning activity that stimulated it.

Ongoing professional learning activities can naturally generate data that complement data from tests and process data. Educators who engage purposefully in these types of professional learning activities diversify their sources of data and develop a more precise understanding of where students struggle. For example, educators distressed about reading scores in an elementary school can design and engage in an action research project to determine if a particular intervention helps students read better. Teachers can also interview students about reading. The data collected as part of the action research project coupled with interview results can be used with scores on reading tests to make sense of and remedy the situation.

Test scores can launch this key question: “What other data — beyond test scores — do we need? How can we obtain these data without more testing?” The answer leads to professional learning activities that aren't as intrusive as testing. The answer leads to professional learning activities that engage educators in examining real work and understanding real students rather than depending solely on the proxy results that

tests provide. The answer leads to professional learning that improves learning for all students.

CONCLUSION

Nutritionists and dieticians argue for well-balanced diets — a little of each food group. Educators need to argue for the same — a little from each type of data source rather than reliance on one data source. Just as fruits and vegetables are considered necessities in the diet, data from real students and real student work accessed through professional learning strategies should become a staple in the data diet.

REFERENCES

- Bernhardt, V.L. (2008).** Portfolios for educators. In L.B. Easton (Ed.), *Powerful designs for professional learning* (2nd ed.). Oxford, OH: NSDC.
- Dietz, M. (2008).** Portfolios for educators. In L.B. Easton (Ed.), *Powerful designs for professional learning* (2nd ed.). Oxford, OH: NSDC.
- Downey, C. (2008).** Classroom walk-throughs. In L.B. Easton (Ed.), *Powerful designs for professional learning* (2nd ed.). Oxford, OH: NSDC.
- Ginsberg, M. (2004).** Classroom walk-throughs. In L.B. Easton (Ed.), *Powerful designs for professional learning*. Oxford, OH: NSDC.
- Laboratory Network Program. (2000).** *Listening to student voices: Self-study toolkit*. Portland, OR: Northwest Regional Educational Laboratory.
- Love, N., Stiles, K.E., Mundry, S., & DiRanna, K. (2008).** *The data coach's guide to improving learning for all students: Unleashing the power of collaborative inquiry*. Thousand Oaks, CA: Corwin Press.
- Robertson, H. & Hord, S. (2008).** Accessing student voices. In L.B. Easton (Ed.), *Powerful designs for professional learning* (2nd ed.). Oxford, OH: NSDC. ■

Educators who engage purposefully in these types of professional learning activities diversify their sources of data and develop a more precise understanding of where students struggle.