At the beginning of the school year, every teacher is committed to the same goal—academic excellence for their students, as determined by annual assessment results. But with approximately 25 students, all with different backgrounds, experiences, learning styles, and abilities, coupled with such responsibilities as classroom management, lesson planning, and parent conferences, this can be a daunting task.

However, it doesn’t have to be. In fact, by looking at data, both from the previous year’s assessment exam and from classroom performance, teachers can gather valuable information about the specific challenges in their classrooms. This article is designed to help teachers identify:

- Curricular challenges common to their students;
- Instructional interventions; and
- Appropriate assessment to gauge the effectiveness of intervention.

Where’s The Problem?
The first place to look is at the assessment data from last year, which can reveal valuable information about student knowledge in a broad area of the curriculum or in specific curricular objectives. As a general rule, if total student performance on a state assessment exam is below the state’s criteria (typically 70 percent) for a given subject, then the objectives were not correctly or appropriately taught.

Even if overall student performance is above 70 percent, teachers should look at the scores in more detail. While total student performance could be on par for a given subject, it could be below par for students of a particular subgroup (e.g., black or limited English proficient students), indicating that a performance gap exists and teachers must find ways to close it.

But how can teachers pinpoint the problem? Is it related to what the teacher is teaching or how it is being taught? There is no quick and easy answer. However, teachers should remember that assessment data should be more than the previous year’s test results. Assessment is a continuous process that can occur after each lesson, chapter, or unit, and also can be applied to homework, class work, and class discussions. The data from these informal assessments can help spotlight the problem. For example, if a quiz or test on a particular concept shows that 80 to 90 percent of the students have mastered it, according to a defined rubric, then the problem probably lies with individual students, who could benefit from tutoring or re-teaching. However, if the overall mastery level ranges from 30 to 40 percent, the problem could be with the teacher’s instruction.

Perhaps students did not have enough time to learn the material or insufficient opportunity to explore and inquire about important concepts. If the majority of the students who did not perform well on the assessment were ESOL students, a potential problem might involve understanding vocabulary.

Getting a Second Opinion
Finding the problem may not be the hardest task; fixing it may be. Probably the most difficult thing to do in any profession is to step back and critique yourself. However, if student performance isn’t reflecting the effort a teacher is putting in, the teacher might benefit from the assistance of an instructional specialist. This is usually an experienced teacher on the staff or available through the district.

An instructional specialist will observe the teacher for one or several classes. Based on these observations, as well as comments from the teacher, the specialist is prepared to offer advice,
suggestions, and instructional strategies. They could be as minor as changing the classroom arrangement of desks or as substantive as incorporating project-based or inquiry-based learning into lesson presentations.

In addition to an instructional specialist, there are a number of alternative sources for second opinions:

**Principal.** The principal should be able to identify any instructional weaknesses or challenges and make appropriate suggestions that could include attending a workshop, reading a book or research articles on a particular intervention, or viewing instructional videos.

**Colleagues.** Among your colleagues, you will usually find experienced teachers with direct knowledge not only of instructional ideas, but also of the student population.

**Curriculum specialist.** A district curriculum specialist is a master teacher in a specific curriculum field. The specialist can help the teacher by making classroom visits, meeting with the teacher to provide suggestions, meeting with groups of teachers to discuss ways in which they can help each other, and providing teachers with appropriate curricular materials and resources.

**Professional development workshops.** Another source of assistance for teachers is workshops, provided by districts, regional centers, and professional organizations, that focus on specific instructional or curricular topics.

**Professional curricular organizations.** Professional curricular organizations, such as the National Council of Teachers of English (NCTE), National Council of Teachers of Mathematics (NCTM), National Science Teachers Association (NSTA), and National Council for the Social Studies (NCSS) offer publications and Web sites that provide a wealth of instructional information specific to their content areas. An advantage of membership in these organizations is the opportunities to network with colleagues at local, regional, and national meetings.

**Did The Intervention Work?**
The answer can be found in the data. Assessments performed before the intervention can be compared with similar assessments performed afterward to determine if and to what degree the intervention was successful. Obviously, an increase in the percentage of students demonstrating mastery indicates success. However, in order to get a true indication of an intervention’s effectiveness, it is important to keep the following two points in mind:

**Don’t lose focus of the topic or area you are addressing.** If you are interested in assessing the class performance on mathematical operations, don’t give the students a test on geometrical shapes.

**Administer several different types of assessments.** If you choose to use a discussion-based assessment, students who are shy about speaking out in front of other classmates might not perform well, even though their understanding may have improved. Multiple informal assessments are the best measure of class and individual mastery.

**The Bottom Line**
The role of the teacher has gradually changed to include that of data analyst. Data is an objective means of quantifying academic goals. Although the emphasis on data and accountability can be overwhelming, teachers need to be concerned only with those things they have control over. By taking advantage of the avenues and opportunities available for them to identify instructional strategies and resources, they should be able to improve both their classroom instruction and the academic performance of their students.

---

George Hademenos is a physics teacher at Richardson High School in Richardson, Texas. His e-mail address is George.Hademenos@richardson.k12.tx.us.
Use this article as professional development for you and your staff. Go to On The Same Page.