

# One Mathematics Teacher's Thoughts on Assessment

**W**riting and administering tests was one of the things I loved most during my fifteen years of teaching. My interest in the assessment process was spurred in part by how much importance my students seemed to place on my assessments, and this emphasis in turn motivated me to write fair and accurate assessments.

## EVOLVING PERSPECTIVES

My growing interest in assessment led me to begin writing test items. While continuing to teach, I spent evenings writing multiple-choice and open-ended mathematics test items for grade 4 up through high school. In this way I learned the basics of good item writing, including aligning to standards and making sure that the mathematics is correct and pedagogically appropriate.

Later, as a fulltime content editor, I started reading and hearing about the issues pertaining to state assessments. Many schools reported feeling pressure to make the yearly progress required by the No Child Left Behind Act of 2001. Teachers complained that testing was consuming valuable classroom time and was even interfering with student-teacher relations. In addition, the emphasis on testing for only reading and mathematics had shifted focus and time from other important subject areas. The threat of NCLB's sanctions

led to rising tensions within some low-performing school districts. Even though I loved working in test development, I was bothered somewhat by the thought that the work I was doing was perhaps contributing to tensions within certain schools and districts.

In my next role, as a mathematics curriculum developer for a major education company, I helped develop high school mathematics curricula for major school districts. These districts purchased our curriculum to help ensure that instruction in their schools was properly aligned to state standards and that (we all hoped) mathematics scores would improve. We adopted a backward design for our model, using the standards as the basis for the curriculum instead of using the textbook to drive instruction. Our curriculum also included diagnostic pretests as well as end-of-unit tests, all aligned to state standards with the intention of better preparing the students.

During my visits to the school districts that used my company's curriculum, I encountered firsthand some of the same issues I had previously become aware of—particularly, teachers' concerns about the implications of their students not performing well and how state testing in general had affected the way they interacted with their students. Once again, I felt as if I were part of a mad rush to get as many students as

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possible ready for the “big test.” As an assessment and curriculum specialist, I had gained a lot of useful and valuable experience, but I could not help feeling that something needed to change.

### RETHINKING STATE TESTS

Currently, most states have end-of-year assessments for certain specified grade levels. These tests, usually scheduled two or more weeks before the end of the school year, subtract considerably from valuable class time. An undue amount of time is spent preparing for, worrying about, and administering the test. In fact, one state uses the word *blackout* to describe the week of state testing. A further challenge for teachers is trying to resume instruction for the remainder of the year (anyone who has tried to teach new material to AP Calculus students after the AP Calculus exam will understand). Basically, the attention devoted to these tests does not seem to be proportional to their purpose.

I am in favor of testing, setting clear objectives based on a state’s standards, and implementing assessments as a tool to measure how well schools are doing in meeting those standards. However, having seen how state tests have compounded problems for some school districts, I wonder if there is a better, more efficient way to achieve these goals. Perhaps we need to rethink ways to modify NCLB participation requirements.

Under No Child Left Behind, each state implements its own measurements to determine whether its schools are making adequate yearly progress. These tests also indicate individual students’ progress. Here, however, is where part of the problem lies. Using state tests to report at the student level can be intrusive; individual student testing should be left to the teachers. No wonder so many teachers have strong reactions to state testing. Eliminating student reporting from NCLB’s requirements would be the first step toward change.

So what about the tests? Even if schools do not have to report at the individual student level, they still need to administer tests to collect schoolwide data to report on adequate yearly progress. The good news here is that not every student needs to take a test for

schools to provide reasonable and accurate data on adequate yearly progress. Tests can be administered on the basis of a representative sampling of students. If the data from the sample yield undesirable results, then funding saved by eliminating mandatory testing and reporting for all can be directed more efficiently to those schools in need. But the number of such schools would certainly not be a majority of U.S. schools; the Center on Education Policy estimates that about 16 percent of all U.S. schools did not make adequate yearly progress for 2004–5. Much time, effort, and money can be saved by sampling and then directing funds where they are needed the most.

Properly designed tests provide useful data for students, teachers, schools, and beyond. The motivating principle behind NCLB is that no child is left behind.

However, current assessment practices

promulgated by this principle go too far in this attempt. The process has become excessive and inefficient. Reporting at the student level has had a divisive effect on public education. Removing the individual student reporting required by No Child Left Behind would lift a great burden from schools. By using representative sampling and redirecting funds to where they are most needed, schools can save both money and time.



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## Write for a Department

Which department do you always read first? “Calendar”? “Media Clips”? “Technology Tips”? How many times have you thought—

- “I have a great problem for the ‘Calendar,’”
- “My file is bulging with newspaper clippings for bringing real-world mathematics into the classroom,” or
- “Just yesterday, I thought of a new calculator approach.”

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