
Collaborating with Teachers to Broaden the Scope of Assessment in Schools

A MOVE TO THE WIDESPREAD USE OF PERFORMANCE-BASED EDUCATION IN OUR NATION'S SCHOOLS IS IN PROGRESS. MANY STATES HAVE ESTABLISHED OR ARE DEVELOPING PERFORMANCE STANDARDS BASED ON MODELS DEVELOPED BY VARIOUS EDUCATION ORGANIZATIONS AND ASSOCIATIONS (E.G., NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS). IN MANY SCHOOLS, TEACHERS ARE CHANGING THEIR INSTRUCTION TO ADDRESS THE STANDARDS, WHICH MEANS THEY'RE FOCUSING ON HELPING STUDENTS NOT ONLY LEARN INFORMATION, BUT ALSO APPLY WHAT THEY LEARN — THEY'RE STRESSING COOPERATIVE LEARNING, ACTIVE LEARNING, PROBLEM SOLVING, HANDS-ON EXPERIENCES, AND THE DEVELOPMENT OF CRITICAL THINKING SKILLS. IN ADDITION, ALMOST ALL CURRENT WHOLE-SCHOOL REFORM PROGRAMS (SUCH AS CRESPAR'S TALENT DEVELOPMENT MIDDLE AND HIGH SCHOOL PROGRAMS) STRESS PERFORMANCE-BASED INSTRUCTION AND CURRICULUM.

But a key element of the standards-based movement is lagging behind — the development and integration of appropriate and valid performance-based assessments. Too often, although some standardized tests makers are trying to incorporate performance activities, students involved in performance-based instruction and curricula may find themselves being assessed on standardized tests that emphasize what has been learned rather than how students can apply what they've learned.

A District of Columbia teacher who uses performance-based instruction based on the *Mathematics in Context* curriculum sums up her assessment concerns as follows: "The children are accustomed to one thing, and then you put this test in front of them, and it's just different... it's pencil and paper, manipulation of numbers, and then the kinds of problems they have to solve are not the kinds that are in the...curriculum."

CRESPAR researchers Sylvia Johnson, Gerunda Hughes, Sheila Thompson, and Michael Wallace at Howard University are working with District of Columbia middle school math teachers to determine how performance-based assessment — e.g., the use of projects, performance demonstrations, and portfolios — can take its rightful place in the performance-based education movement. The researchers and teachers are involved in the development of a collaborative to learn about, develop, and integrate performance-based assessment into their classrooms. The CRESPAR researchers have observed staff development activities to see how performance-based assessment is currently included, surveyed middle school mathematics teachers about their concerns for implementing reform, conducted focus group interviews to examine teachers' attitudes toward and perceptions of their role in school reform, and held in-service sessions for middle and high school mathematics teachers during the 1996-97 school year.

**Summer Institute
Observations**

At the Mathematics, Science and Technology Initiative (MSTI) Summer Institute in 1996, District of Columbia teachers were introduced to *Mathematics in Context*, a performance-based education curriculum. They played the role of middle school students by working through the performance-based units.

In one unit, for example, they grew beans and discussed ways to present data on their project through charts and graphs, group skits, demonstrations using the metric system, and preparation of museum exhibits. Other teachers who had been using the curriculum served as facilitators, modeling the role of the teacher in an interactive performance-based program.

CRESPAR observers found that the teachers were interested in and enthusiastic about implementing performance-based curricula, but they were apprehensive about the lack of systematic assessment for both teachers and students. They asked: How well-versed will the “higher ups” be about the processes or about the goals and assumptions? How will teachers be evaluated since there is no list of objectives? And, if standardized tests like the SAT do not adequately assess student performance on the new standards, then how does one decide whether a child has demonstrated mastery in the classroom?

Survey of Middle School Mathematics Teachers

CRESPAR researchers surveyed 53 middle school math teachers who attended the summer institute to get their attitudes toward and opinions about curriculum change and performance-based assessment. Analyses of the data showed that:

- The teachers felt they were able to carry out school reform. Half of the respondents said they have “almost complete freedom” to do what they think is best in their teaching situation and the same number had “a lot” of control over decisions involving content, topics, and skills to be taught.
- The teachers were ready for reform. Although most had been teaching at the middle school level and teaching math for 21 years or more, 96% felt confident in changing their teaching methods and 92% felt confident in implementing change in the area of classroom assessment. After working on alternative assessments, over 40% indicated great change in their expectations for student learning and performance and nearly 27% said they had changed their attitude toward assessment in general.

Focus Group Interviews

Six of the middle school math teachers who had implemented *Mathematics in Context* in the 1995-96 school year and contributed to the summer institute participated in focus group interviews. These teachers described their role in performance-based education as facilitators instead of lecturers — encouraging students, promoting creativity, and allowing students to do more discovery. They worked less from a textbook and initiated more cooperative group work in the classroom. They reported that this translated into a much noisier classroom, but it also produced much more interested, motivated, and enthusiastic students. These teachers also voiced concerns about the mismatch of standardized tests in relation to assessing a performance-based program.

In-Service Sessions

Over the course of the 1996-97 school year, CRESPAR researchers facilitated in-service sessions for District of Columbia middle school mathematics teachers on the construction and use of performance-based assessment. These sessions introduced the fundamental concepts of alternative assessments and their use in the classroom; provided guidance on modifying classroom management, instruction, and evaluation skills; suggested ways to better understand students’ problem-solving and critical-thinking skills through discussions of psychological principles in the development of assessment, and showed teachers how to interpret scores and articulate results

of performance to students and parents. Teachers were also shown how to design classroom-based research on performance assessments and how to report the results of this kind of research.

Implications

To move into widespread use and make a difference in the achievement of students placed at risk, performance-based education requires performance-based assessment. This CRESPAR work shows that many teachers are ready and able to learn about and use alternative assessments. It also shows that teacher development workshops can be designed by school systems in collaboration with university partners and teachers to help teachers incorporate these assessments into their performance-based instruction and curriculum. ■