Teaching Practices and Strategies

Many important insights about teaching practices and strategies that support students of color and English language learners can be gleaned from those who have been studying and writing in the field. Some of these educators and researchers focus specifically on the mathematics classroom, but there are also accounts from science and literacy that have a great deal to offer the teaching of mathematics.

Gloria Ladson-Billings studied exemplary teachers of African-American students and has written about an approach of "culturally relevant teaching." Although the teachers she studied differed in the way they structured their classrooms—some appeared more "traditional," while others were more "progressive" in their teaching strategies—their conceptions of and beliefs about teaching and learning had many commonalities. Here is a subset of characteristics of these teachers adapted from Ladson-Billings' list (1995). These teachers

- believed that all students are capable of academic success.
- saw their pedagogy as always in process.
- developed a community of learners.
- encouraged students to learn collaboratively and be responsible for each other.
- believed that knowledge is shared, recycled, and constructed.
- believed they themselves must be passionate about learning.
- believed they must scaffold, or build bridges, to facilitate learning.
- believed assessment must be multifaceted.

Overall, these teachers supported their students and held them to high standards:

> Students were not permitted to choose failure in their classrooms. They cajoled, nagged, pestered, and bribed the students to work at high intellectual levels. Absent from their discourse was the "language of lacking." . . . Instead, teachers talked about their own shortcomings and limitations and ways they needed to change to ensure student success. (p. 479)

Critical to teaching students who bring a variety of cultural, social, and linguistic experience into the classroom is what Marilyn Cochran-Smith (1995b) calls "understanding children's understanding":

> [C]entral to learning to teach in a culturally and linguistically diverse society is understanding children's understanding or exploring what it means to know a child, to consider his or her background, behaviors, and interactions with others, and to try to do what Duckworth calls "give reason" to the ways the child constructs meanings and interpretations, drawing on experiences and knowledge developed both inside and outside the classroom. (p. 511)

Eleanor Duckworth, whom Cochran-Smith cites above, may have originated the phrase *understanding children's understanding* in her essay of the same name (1996). In that essay, she discusses the idea of "giving children reason" as she describes a group of teachers in a study group who set themselves this challenge: "[E]very time a child did or said something whose meaning was not immediately obvious . . . [they] sought to understand the way in which . . . [it] could be construed to make sense" (pp. 86–87).

This work of hearing and understanding students' ideas, discourse, and representations and involving all of them in significant intellectual work can be especially challenging when students come from backgrounds quite different from the teacher's own. Cindy Ballenger's *Teaching Other People's Children* (1999) and Vivian Paley's *White Teacher* (1989) provide first-person accounts of teachers who are actively examining their own preconceptions about the behavior and discourse of the students they teach. Ballenger expresses how her initial belief that all students' could learn was not enough:

> I began with these children expecting deficits, not because I believed they or their background was deficient—I was definitely against such a view—but because I did not know how to see their strengths . . . I came to see . . . strengths . . . that are part of an intellectual tradition, not always a schooled tradition, but an intellectual one nonetheless, and one that, therefore, had a great deal to say to teaching and learning. (p. 3)

Ballenger recounts her journey in learning to listen to the sense of her students, both "honoring the child's home discourse" and engaging the student in "school-based and discipline-based ways of talking, acting, and knowing" (p. 6).

Working in English with students whose first language is not English presents two challenges to teachers who do not share the student's first language: (1) how to learn about, respect, and support the discourse practices that students can contribute from their own knowledge and communities; and (2) how to bring students into the language of the discipline of mathematics in English. Judit Moschkovich (1999) identifies two critical functions of mathematical discussions for English language learners: "uncovering the mathematical content in student contributions and bringing different ways of talking and points of view into contact" (p. 11). She identifies several important instructional strategies that support these students' participation in math discussions (p. 11):

- using several expressions for the same concept
- using gestures and objects to clarify meaning
- accepting and building on student responses
- revoicing student statements with more technical terms
- focusing not only on vocabulary development but also on mathematical content and argumentation practices

Josiane Hudicourt-Barnes (2003) writes about the participation of students whose home language is Haitian Creole. Her research highlights the way that understanding the forms of discourse students contribute from their own culture enables teachers to uncover and appreciate how students are making sense of subject matter. Although she writes about science learning, her observations are applicable to the mathematics classroom: "To be 'responsive to the children and responsible to the subject matter' (Ball, 1997, p. 776), we must be able to hear children's diverse voices and create opportunities for them to pursue their ideas and questions (p. 17)." Further, she argues that classroom discourse that follows a rigid, restrictive format "may mean that children from families of non-Western traditions are shut out of classroom participation and that skills from other traditions are devalued and subtracted from children's cognitive repertoires, and therefore also made unavailable to their fellow students" (p. 17).

Being "responsive to the children and responsive to the subject matter" is highlighted by many of the writers in this field. They emphasize that the teacher's responsibility is *both* to the students' ideas, sense making, and forms of discourse *and* to bringing these students in to the ideas, vocabulary, and ways of working in the discipline of the content area. Gloria Ladson-Billings (2002) sums up her observations of a teacher whose urban, largely African American, students, initially hated writing:

> To meet the academic goals he had set, Carter had to rethink his practice in some fundamental ways. . . . He had to keep a sense of uncertainty and a willingness to question in the forefront of his teaching. . . . while Carter empathized with the students' struggle to write he understood that his job was to teach them to do it. He didn't put them down for not enjoying writing or writing well, but he also did not let them off the hook. He had to help them appreciate the power and fulfillment of writing and he had to preserve each student's sense of self. (p. 118)