

EDITOR'S NOTE

Photo by Mount Burns



Civil rights activist Robert Moses points out that illiteracy in math is acceptable in our culture in a way that illiteracy in reading and writing is not. Moses—founder of the Algebra Project—argues in his autobiographical *Radical Equations: Civil Rights From Mississippi to the*

Algebra Project, “Failure is tolerated in math but not in English. Your parent may well lean over your shoulder as you struggle with the term paper your English class requires, or the book report that is due, making sure that you write it, checking the spelling and grammar. But if you’re struggling with an equation while doing your algebra homework, more likely your parent will look over your shoulder, wrinkle a brow in puzzlement, then say something like ‘I never got that stuff either; do the best you can and try not to fail.’”

Moses makes the case that math—and algebra, in particular—is today’s equivalent of the voting rights of the 1960s and increasingly separates the haves and have-nots in our society. As the high tech “knowledge worker” replaces the assembly line worker, youngsters who don’t acquire higher math reasoning skills will be denied a foothold in the American economy of the 21st century.

Moses isn’t the only one worried about our students’ mathematical abilities. While the 2005 National Assessment of Educational Progress (NAEP) math scores show some improvement—a fact that U.S. Secretary of Education Margaret Spellings credited to No Child Left Behind—other indicators paint a less optimistic picture. The most recent Trends in International Mathematics and Science Study (or TIMSS), released in December 2004, revealed no measurable change in the average math scores of U.S. fourth-graders between 1995 and 2003. Eighth-graders’ TIMSS scores did increase over the eight-year period, but trailed behind scores of students in five other industrialized nations (Belgium, Hungary, Japan, Korea, and the Netherlands). Another measure—the Program for International Student Assessment (PISA)—indicates that 15-year-olds in the United States rank in the middle of the pack when it comes to math problem solving. The U.S. came in 25th among 40 industrialized nations participating in the 2003 mathematics assessment.

A major factor in students’ standings on such tests is their teachers’ knowledge of mathematics and the ability to teach it effectively. According to the Council of Chief State School Officers, only 67 percent of the nation’s math teachers majored in that subject. In the Northwest, that figure drops to just 56 percent.

Improving math instruction and learning—and addressing equity issues raised by critics like Robert Moses—has taken on added urgency with NCLB’s high-stakes tests and requirements for highly qualified teachers. That, in turn, has led to broader recognition of the role that effective professional development plays in increasing teachers’ content knowledge and bolstering their practice. The NCLB Act acknowledges that professional development activities “are an integral part of broad schoolwide and districtwide educational improvement plans.” The act further states that such activities give teachers and school leaders the tools to help students meet challenging state academic standards.

In this issue of *Northwest Education*, we look at different forms of mathematics professional development throughout our region. We follow Idaho middle school teachers as they revitalize geometry instruction and see how Oregon teachers are introducing algebra to the youngest students. We discover strategies for teaching mathematics in the ELL classroom. And, we describe an intensive approach to professional development in Montana, where teachers learn content and pedagogy in a year-round program.

This represents the final *Northwest Education* under our current Regional Educational Laboratory contract. But, it’s by no means the last issue of our 10-year-old magazine. *Northwest Education* will be back at the end of the school year (summer 2006) with a strong emphasis on applying the most rigorous research to educational challenges. We look forward to continuing to bring you stories from the field that inspire, illuminate, and instruct.

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