EDITORIAL

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Much discussion has been given to President Bush's education agenda characterized by the phrase "No Child Left Behind." The overall goals of that agenda include placing a "highly qualified" teacher in every classroom, holding schools/districts accountable for student achievement, and emphasizing educational practices grounded in scientifically based research. On the surface, these goals are laudable. There are, however, a number of crucial issues that will have to be addressed in order for these goals to bring about positive educational change. These issues include defining what "highly qualified" means, on what student achievement standards will schools be evaluated, who decides what those standards will be, and what does scientifically based research mean when applied to educational questions.

Having a "highly qualified" teacher in every classroom should be of particular interest to those of us who are involved in mathematics teacher preparation and/or professional development, given the tremendous shortage of mathematics teachers. In Missouri, for example, from August 15, 2000 to October 15, 2002 a total of 181 secondary mathematics teachers were graduated from 30 different teacher preparation institutions in the state. Each year, between 400 and 500 mathematics teaching vacancies are reported in Missouri. When we look nationwide, we find the shortage even more critical. In some states 40 to 60% of the middle/secondary students are in mathematics classes being taught by persons without a major or a minor in mathematics.

The No Child Left Behind Act allows individual states to define what "highly qualified" means. I believe this definition will be crucial and can have significant impact on K–12 mathematics education. Currently, the Missouri Department of Elementary and Secondary Education considers anyone with a teaching certificate to be "highly qualified." Under this definition, persons teaching out of their field or who hold a provisional/temporary certificate would be deemed "highly qualified." In reality, this definition provides approval for teachers that most of us would consider, at best, marginally qualified to teach mathematics. Furthermore, this practice may actually "hide" the magnitude of the teacher shortage since the State Department, using this definition, will be able to report that a significant number (close to 100%) of Missouri's mathematics teachers are "highly qualified."

As an example, consider those teaching under a Temporary Authorization Certificate. The requirements for a TAC include a person having a bachelors degree, a 2.5 gpa and for a school district to be willing to hire him/her. The district then decides what classes such a teacher will teach. The TAC holder is expected to work toward full certification by taking up to 9 semester hours of college classes each year, but is allowed to teach during this time.

Providing alternative routes to certification, particularly for "second career" individuals, can help us address the teacher shortage. Labeling individuals in these programs as "highly qualified" is indefensible. Surely, the intent of NCLB should be that highly qualified teachers have met rigorous standards and have demonstrated thorough mathematics knowledge/understanding and appropriate mathematics related pedagogical skills and practices. The issue of teacher quality is directly related to improving student achievement. By labeling virtually everyone teaching a mathematics class as "highly qualified" we run the great risk of actually lowering student achievement in mathematics since schools, parents, and communities will be deceived into thinking that "all is well" in these classes when, in reality, teachers with marginal qualifications may be hindering the mathematical development of students.

I encourage you to contact appropriate individuals at your state department of education and ask them to provide you with their definition of "highly qualified."

(I want to thank Dr. Robert Reys of the University of Missouri–Columbia for providing me with some of the data and information used in this editorial.)