Reaching All Learners: Providing Equity in Mathematics Education

Reaching All Learners makes mathematics understanding and mastery obtainable to all students, and supports teachers and parents as they help students attain that mastery. The goal of Reaching All Learners is to provide every person with ample and equitable opportunities to approach mathematics. When mathematics educators discuss equity in mathematics teaching and learning, their language often includes phrases that include all children, such as “mathematics for all children” or “mathematics opportunity for every child.” Inherent in this language is the desire to provide every child high quality mathematics education that will give them access to professions and careers of their choice (Malloy, 2004).

Equity in mathematics education is about access—that is, Reaching All Learners. However, we have not been successful at achieving measurable equity in achievement, which means that students do not have the opportunity to acquire skills necessary to access 70% of careers of today (Moses, 2001).

Schoenfeld discusses the “potential for providing high quality mathematics instruction for all students” (p. 13) from a systemic perspective. He lays out four systemic conditions that are necessary for achieving this goal: “(a) high quality curriculum; (b) stable, knowledgeable, and professional teaching community; (c) high quality assessment that is aligned with curricular goals; (d) and stability and mechanisms for the evolution of curricula, assessment, and professional development” (Schoenfeld, 2002). These conditions are critical for schools and districts to consider and implement as they progress toward the ultimate goal: ample and equitable opportunities in mathematics.

It Begins With Teachers

For students to have equal access to mathematics, teachers must have strong math backgrounds and instructional skills. They have to be confident in teaching mathematics, and they must have access to ongoing staff development that is available when it is needed. Because teachers and students have varied styles of teaching and learning, it is important to recognize that there is no “one” correct way to teach mathematics. Teachers, more than any other single factor, influence what mathematics students learn and if they master the material.
Flexible Instruction

As students are expected to learn at higher levels and to attain higher standards in mathematics, educators must provide all students with the opportunity and support to achieve these higher goals. Reaching All Learners ensures that the needs of each student are addressed in a manner that allows students to use their own personal strengths to attain the goals expected of them. Reaching All Learners does not mean that every student receives the same instruction; rather, it calls for reasonable and appropriate accommodations to be made to promote access and attainment for all students.

Reaching All Learners provides a two-pronged approach to reaching all learners in the classroom. Reaching All Learners addresses the different learning styles all students bring to the learning process. Reaching All Learners addresses the needs of special student populations, including students of different learning abilities, gifted students, IEP students, and speakers of different languages. Teachers must be able to differentiate instruction for students of varied learning styles, prior experiences, interests, socialization needs, and comfort zones (Benjamin, 2005) and abilities.

Getting Parents Involved

Emphasizing parental involvement at home in math learning is another aspect of Reaching All Learners. Research has shown that the more parents are involved with their children’s learning, the more successful children are in school (U.S. Department of Education, 1994). Reaching All Learners can help parents understand the skills and procedures used by their children in mathematics learning. To ensure Reaching All Learners, activities that are easy to follow and use everyday materials, are an ideal bridge between the classroom and home environments. Such materials must be informative, useful, and easy for parents to use.

Reaching All Learners helps to guide parents in their efforts with their children, making them more productive (Epstein, 1994). Reaching All Learners is designed to help students attain mathematical standards, help teachers gain a broader understanding of mathematics, and help parents support their children at home. If all students, teachers, and parents are to be involved in mathematics, a mathematics program must be equitable and accessible.

Making Reaching All Learners Work

Equity is a key aspect of learning and understanding. All students can learn math, all teachers can successfully teach math, and all parents can support math learning at home—the key is to make mathematics accessible to all.

References


Carol E. Malloy, Ph.D. is Associate Professor in Mathematics Education in the School of Education at the University of North Carolina at Chapel Hill. Carol was a member of the NCTM Board of Directors 1998–2002, NCTM Standards 2000 writing team, and president of the Benjamin Banneker Association. She has 20 years of teaching experience in public schools across the United States.