

Mathematics is a subject loved by too few. Still, most of us are aware of its importance in this ever more technologically demanding society. As a teacher and graduate student of mathematics, I embrace the concept that excellence and achievement begin with the belief that math can be learned by everyone. I expect much of my students because I have repeatedly seen that fear and obstacles can be overcome. These high expectations lead to successful students.

As a teacher I often face students who have had a very negative past experience with math. Through various and often very subtle ways, they pick up that math is difficult or that it is not for everyone. Most insidious is the persistent belief of some that a student may be “too right brained” for math. This is an unsubstantiated theory, as “much of brain research remains theoretical and primitive.” (John Bruer). These stereotypes and negative ideas about what math is and what it requires of a student only serve as obstacles to learning. Educators and parents must strive to undo this damage.

I favor a “math can be understood by everyone” approach to working with students. In an experiment conducted in 1968 by Robert Rosenthal, a professor of Social Psychology at Harvard, Dr. Rosenthal and another researcher, Dr. Lenore Jacobson, sought to analyze the phenomena of the self-fulfilling prophecy. They approached a teacher, chosen at random, and told her that she was fortunate to have in the class students that had tested as highly gifted. The class, in reality, was an average class with average students. The “gifted” students were in fact chosen at random as well. The researchers told her that they fully expected these gifted students to outperform the other students by the end of the school year. The teacher was told that she was selected because, as an exceptional teacher, she would be able to help the students reach their full potential. At the end of the school year, the teacher reported that her students were exceptional and eager to learn. And, they had actually performed at a highly gifted level surpassing the other “average” children!

When children are taught to believe in their own innate ability to be successful, their vision of the world changes. As they begin to succeed in mathematics, they begin to extend the

pattern of successful behavior to other things. They see that they can do and be anything.

Success in mathematics imbues one with a genuine sense of confidence; when one is successful in mathematics, the world seems not so intimidating, and all kinds of problems seem solvable.

For these reasons I find purpose in the teaching of mathematics. I believe that the practice of mathematics is a mental exercise that strengthens critical thinking skills. Students choose an approach to a problem and then they consider the consequences. They analyze the problem and support solutions with evidence. Considering these and other benefits, the best thing we can do is to encourage our students to enjoy mathematics and to promote its teaching in the schools.