

Minnesota math, science achievement stands out internationally

Last Updated Wednesday, 17 December 2008

Posted 12/12/08

Minnesota educators like Laurie Resch, Director, Elementary Curriculum, Instruction and Assessment for the Anoka Hennepin School District helped explain some of the good news announced last week by Minnesota's Department of Education.

The Department, and a statewide association called Sci-Math Minnesota released an analysis of "Trends in International Math and Science Study," also known as "TIMSS." The study compared math and science skills of Minnesota 4th and 8th graders with students from more than 60 other countries.

MDE officials called it the "largest study of science and math achievement in the world." Results included:

- Minnesota's 4th graders showed the largest increase in math performance of the 16 countries that participated in both the 1995 and 2007 study.

- Minnesota's eighth graders scored significantly better than 44 countries in math. Only five nations scored significantly higher than Minnesota's eighth graders.

- Minnesota ranked among the top five among the 60 countries in both 4th and 8th grade in science, although there was not much change in how students performed in 2007 compared to 1995.

Resch understands. Anoka-Hennepin is seeing considerable progress in 11 of the 12 K-5 schools that have made an important change. Individual teachers no longer are expected to be experts in math, reading, writing, social studies, and science.

The district has created teams with one teacher responsible for science and math, and another focusing on writing, reading and social studies. Rasch explained, "Teachers report being more effective and better able to reach their students." The program is so successful that the district plans to expand it to another four schools next year.

All over the state, educators are using different approaches to help increase achievement in reading and math. Forest Lake's Central Montessori Elementary has grouped students in grades 1-3, and 4-6. Principal Gayle McGrane told me this "helps teachers really get to know students well, and helps develop a strong sense of community." Cameron Hedlund, director of Lakes International charter in Forest Lake, which had some of the highest 5th grade science scores in the state, credited the International Baccalaureate curriculum that the school uses for helping produce strong results.

Business leaders, who helped pay for Minnesota to participate, were delighted by TIMSS results. Jim Bartholomew of the Minnesota Business Partnership told me "we are very pleased by the math progress. Our companies are deeply interested in students gaining strong math and science skills. That will be vital to help grow our economy." Stacia Smith of the Minnesota Chamber of Commerce called the TIMSS results "very promising. a reflection of the progress Minnesota can make when we have focused, coherent, and rigorous standards."

A common theme among the more than 30 educators I talked with last week was, as Rash put it "We still have room for growth." Statewide, less than 40 percent of Minnesota's 5th graders scored proficient on the state's science test. But this is the first year students took the test. Educators believe results will improve.

Yes, we face challenges. Nevertheless, congratulations to Minnesota students and educators credit for real, important progress.

Joe Nathan, a former public school teacher and administrator, directs the Center for School Change, Humphrey Institute, University of Minnesota jnathan@umn.edu. This e-mail address is being protected from spam bots, you need JavaScript enabled to view it