Wellesley math teachers learn Singapore techniques from Tenacre specialist

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Wellesley
By Sarah Thomas, Town Correspondent

A group of Wellesley math teachers learned new techniques for teaching word problems at a recent seminar that originated on the other side of the world.

The seminar was hosted by Kevin Mahoney, math curriculum coordinator at Tenacre Day School. Under Mahoney's leadership, Tenacre has adopted a new philosophy in teaching math, one which takes its inspiration from successful math students in Singapore.

"Kevin (Mahoney) did a wonderful presentation," said Jen MacPherson, Wellesley Public Schools' elementary math coordinator. "About 20 of our teachers attended, and it will have a great benefit for the structure we use to teach word problems."

Though MacPherson stressed that the district was not considering a switch to the Singapore math method, she praised the techniques Mahoney taught, which focused on teaching children to draw diagrams to solve word problems.

"Kids struggle with word problems," MacPherson said. "This is an easy tool to use in any curriculum."

Diagrams are a foundation technique of Singapore math, which has been growing in acceptance in American schools since 2000, Mahoney said.

"American professors of education became interested in the way Singapore teaches math because it was around that time that Singapore shot to the top of international studies in math and science teaching," Mahoney said. "Educators in America started to see this data and said there must be something to the curriculum."

And when it came to adoption in American classrooms, Singapore has another leg up on other high-achieving math nations like Japan; Singapore textbooks are printed in English.

"In Singapore schools, children might come in speaking any number of languages, but the language of instruction is English," Mahoney said. "So this entire approach is developed for students who are learning English as a second language."

The difference between Singapore math and the way math is normally taught in American classrooms, Mahoney said, is the emphasis on pictures and diagrams.

"In typical American classrooms, when a teacher has to teach a new math concept, they might go straight from something physical like using blocks to demonstrate addition to the algorithm itself, which is more abstract," Mahoney said. "Singapore math adds another step of seeing pictures, which bridges the gap between those two extremes."

Tenacre adopted Singapore math two years ago. While Mahoney said the first data on the difference in standardized test scores will not be collected until next year, he has already seen results in the day-to-day interactions between teacher and student.

"Students are more capable than they ever have been in number sense, problem solving, and mental arithmetic," Mahoney said. "The kids' excitement and sense of self-esteem around mathematics is already increasing."

Mahoney will be offering a more in-depth class on some of the methods associated with Singapore math this summer, which MacPherson said some of the Wellesley faculty might choose to take. As to whether she will offer more professional development opportunities related to Singapore math, that remains to be seen.

"It's hard to say what kind of professional development we might do in the future," MacPherson said. "I'd have to read more about the results gained, but I can see learning more about the topic."

Sarah Thomas can be reached at sarah.m.thomas@gmail.com.
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