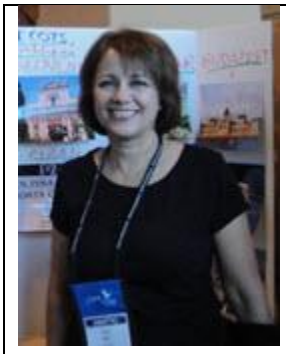
The Singapore System

Fary Sami, Hartford CC



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During the last 20 years, there has been an increasing awareness that the U.S. is falling behind in its mathematics education of primary and secondary school students. Deficiencies in mathematics training will eventually lead to critical shortages of future scientists and engineers. Our schools are underperforming in comparison to other developed and even underdeveloped countries with respect to mathematics education. For those who teach mathematics at the community college level, the deficiencies in mathematics education are painfully evident by the number of students requiring remedial math courses.

International comparisons of mathematics skill levels of secondary students are reported every four years in "Trends in International Mathematics and Science Study" (TIMSS, 2010), and every three years in "The Program for International Student Assessment" (PISA) (OECD, 2009). These reports show that there is a wide range of mathematics proficiencies among countries world-wide. As expected, students in developed countries performed better than those in underdeveloped countries.

During the past decade, Singapore has been among the top-performing countries in the world in mathematics education according to the TIMSS and PISA reports. However, Singapore has not always been a top-ranked country. Rather, it has demonstrated a marked improvement in ranking over the past two decades as the result of a total reevaluation of its mathematics instruction program in the 1980s. Because of Singapore's success, some of our nation's schools have adopted Singapore's approach to teaching mathematics. Could the educational techniques used to improve Singapore's program be applied at the community college level? The International

	Education subcommittee of AMATYC reasoned that lessons learned in high-performing countries might be applied to improve math-skill retention of community college students taking remedial mathematics courses in preparation for college-level mathematics. Although there are several factors contributing to the success of Singapore's mathematics education system, the main focus of this article is on their primary school curriculum.