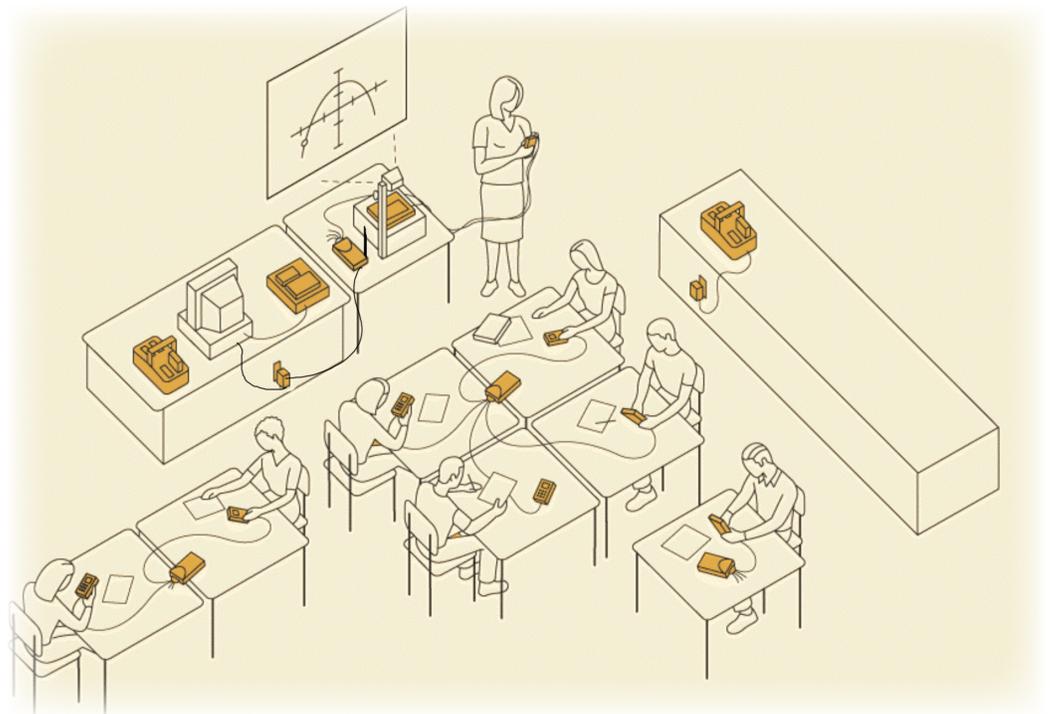


# MathForward™

## District Report



### **Canton, Ohio** Local School District

September 2008

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# Canton, Ohio Local School District

## District Context

Canton Local School District is a small district located in the suburbs of Canton, OH, an urban community of 80,000 residents. The district is comprised primarily of White students, and over one third are from low-income families. Relative to other districts in the state, mathematics scores in Canton are above average. One teacher from the district's high school and 5 teachers from its middle school participated in MathForward™ in 2007-08. Over 300 students were part of the program. For the district, it was the first year of participation in the program.

Table 1. Characteristics of Students in the Participating Schools in the District

	Faircrest Memorial Middle School	Canton South High School
Ethnicity	Percent of Students	Percent of Students
African American	10.4%	9.5%
Hispanic	0.8%	0.5%
White	88.6%	89.9%
Asian/Pacific Islander	0.2%	0.1%
Native American	0%	0%
Free or Reduced Price Lunch	41%	24%
English Language Learners	N/A	N/A
Students with Disabilities	N/A	N/A

## Implementation of MathForward™

In 2007-08, Canton's implementation transformed the MathForward™ program design, in that teachers made limited use of interactive teaching methods in conjunction with TI-Navigator™.

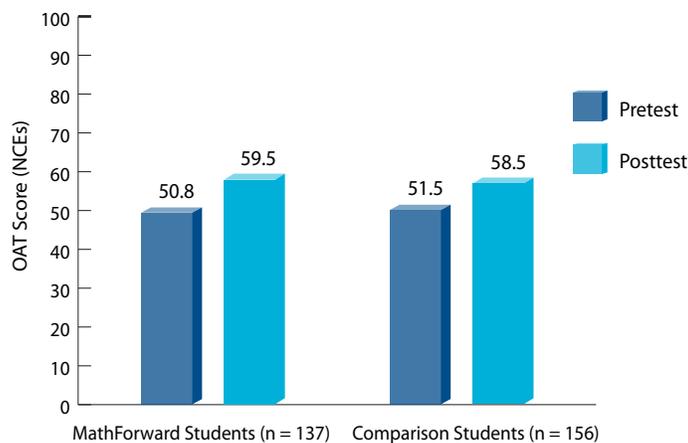
<b>Professional Development</b>	All teachers participated in initial workshops focused on the program as a whole and on the use of Navigator, and nearly all participated in follow up workshops and received coaching from TI.
<b>Block Scheduling</b>	Both schools implemented double blocks of mathematics instruction for students in the program, who were exposed to 7 or more hours of instruction in mathematics each week.
<b>How Teachers Are Using TI-Navigator™ in Classes</b>	At least at some time points, teachers in both schools made use of all TI-Navigator™ tools, but their use was not consistent across the school year. In fall and winter, use among middle school teachers was high, but in spring it was low. The high school teacher's use of the tools increased over the school year. Most teachers rarely used TI-Navigator™ to foster student discussion, and on average, teachers reported only sometimes using TI-Navigator™ data to adjust instruction. Implementation levels were higher in 7th grade, compared with the other grade levels.
<b>Teacher Common Work Time</b>	Teachers in the middle school had common planning time in which they discussed MathForward™. Seventh grade teachers reported they used this time to discuss Activity Center activities. Only one teacher from the high school participated, and she did not discuss MathForward™ with colleagues in her school during planning periods.

## Achievement Results

For Canton Local Schools, the growth of different cohorts of students was analyzed. Growth in achievement of 7th and 8th grade MathForward™ students from 2007 to 2008 was compared to growth of students in the same grade levels from 2006 to 2007. No high school data were available for analysis. Although the cohorts were similar in composition, cohort comparisons have the disadvantage that events that took place during the focal years could have impacted the results.

In seventh grade, where implementation was high, student growth in the MathForward™ cohort was higher than in comparison cohort; however, the results were not different from chance (Figure 1). Results were no different for special education students or for African American students.

Figure 1. Overall Results for 7th Graders in Canton  
(Comparison of NCEs on OAT)



In 8th grade, where implementation levels were slightly lower, MathForward™ students' scores decreased significantly relative to the earlier cohort of 8th grade students (Figure 2). Overall, special education students and African American students gained less, but there was a positive effect of being in MathForward™ for African American students (Figure 3).

Figure 2. Overall Results for 8th Graders in Canton  
(Comparison of NCEs on OAT)

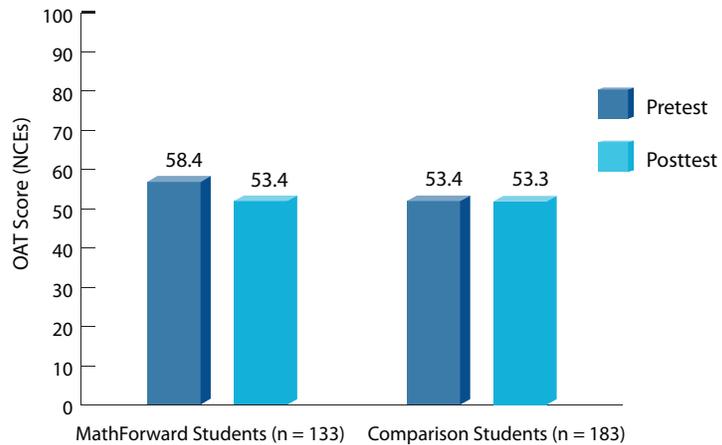
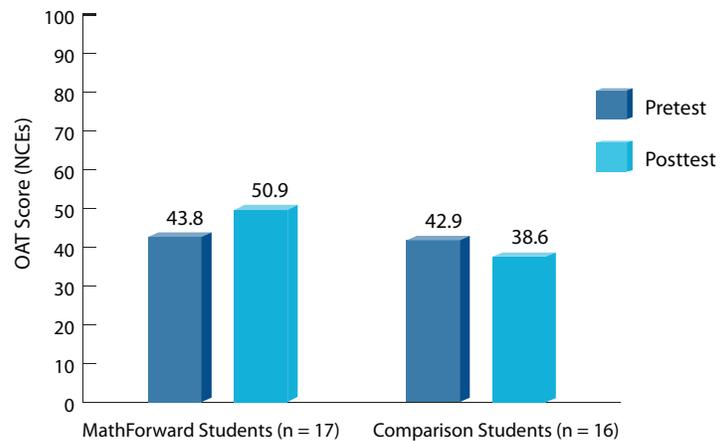


Figure 3. Results for African American 8th Graders in Canton  
(Comparison of NCEs on OAT)



Canton is a case of a district where differences in outcomes by grade level appeared to be correlated with levels of implementation. Higher levels of implementation were linked to better outcomes, providing some support for evidence that interactive teaching methods are an important ingredient in the program's success. In addition, Canton was an example of a district where, despite small numbers of students, MathForward™ had a positive, gap-closing effect for African American students. At the same time, the differences between gains in 2007 to 2008 may have been caused by factors other than MathForward™, such as events that took place during the 2007-08 school year.



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