Preparation, Placement, Proficiency

Improving Middle Grades Math Performance—Implications for Access and Equity

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Middle Grades Math: Why Algebra Matters & How Technology Can Help conference
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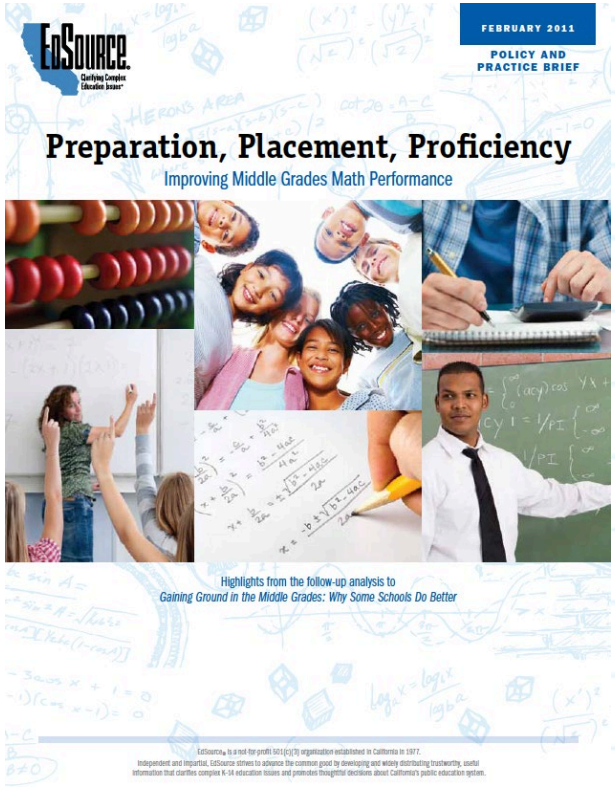
Clarifying Complex Education Issues®

The story of 69,663 California students

These students:

- Were 8th graders during 2008–09.
- Attended 303 middle grades schools across California.
  - Roughly half of these schools served predominantly students from lower-income families.
  - The other half served predominantly students from middle-income families.



Preparation, Placement, Proficiency brief, Feb. 2011

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- Given their prior achievement and how they were placed, how did these students perform in math in 8th grade?

Findings from our placement analysis

8th graders' preparation in mathematics varied widely.

Prior-Year (2008) Achievement on the Grade 7 Mathematics CST, Among 69,663 8th Graders Enrolled in the 303 Sample Schools in 2009

Five State-Defined CST Performance Levels	Seven Performance Levels Considered in Our Analysis	Percent of 8th Graders in the Sample (in 2009) Who Scored at Each Level on the Grade 7 Mathematics CST in 2008 (n=69,663)
Far Below Basic	Far Below Basic	5%
Below Basic	Below Basic	19%
Basic	Low-Basic	15%
	High-Basic	16%
Proficient	Low-Proficient	15%
	High-Proficient	16%
Advanced	Advanced	13%

Note: Percentages do not sum to 100% due to rounding.

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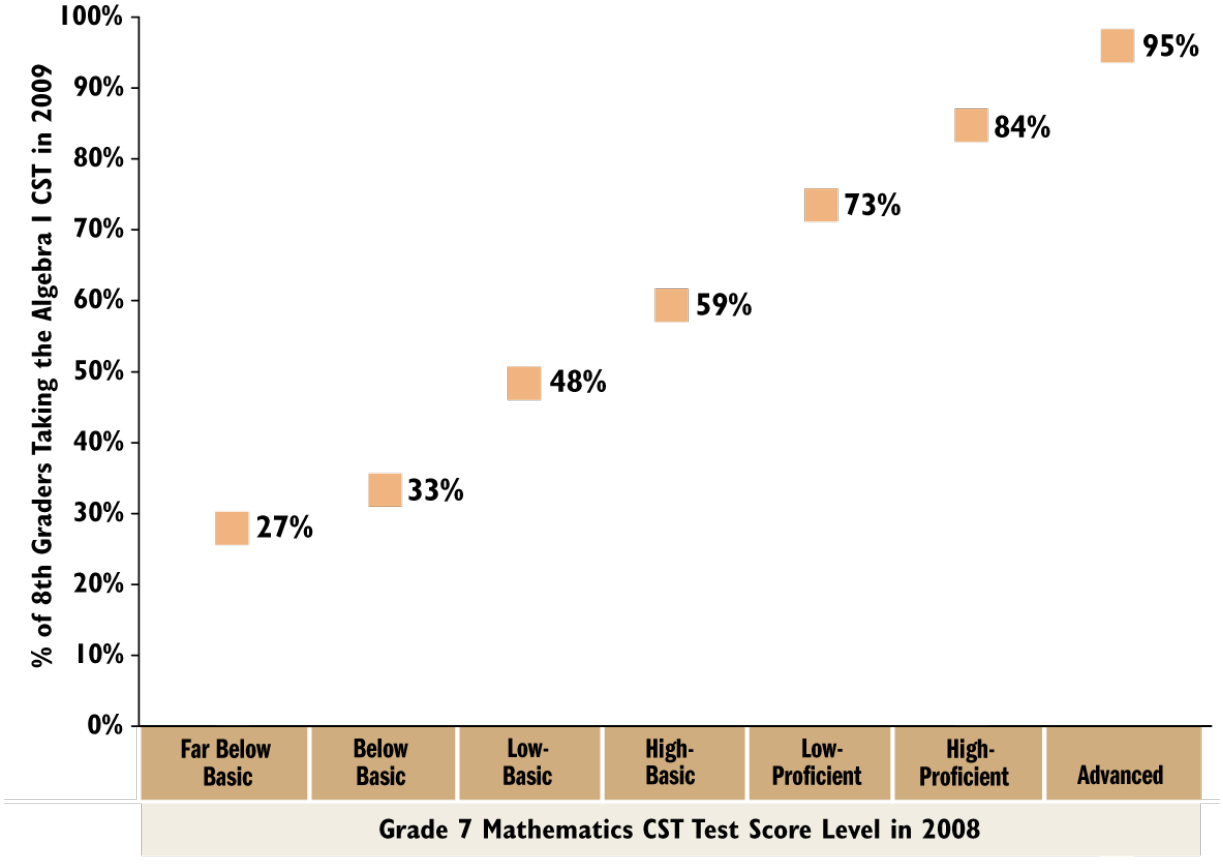
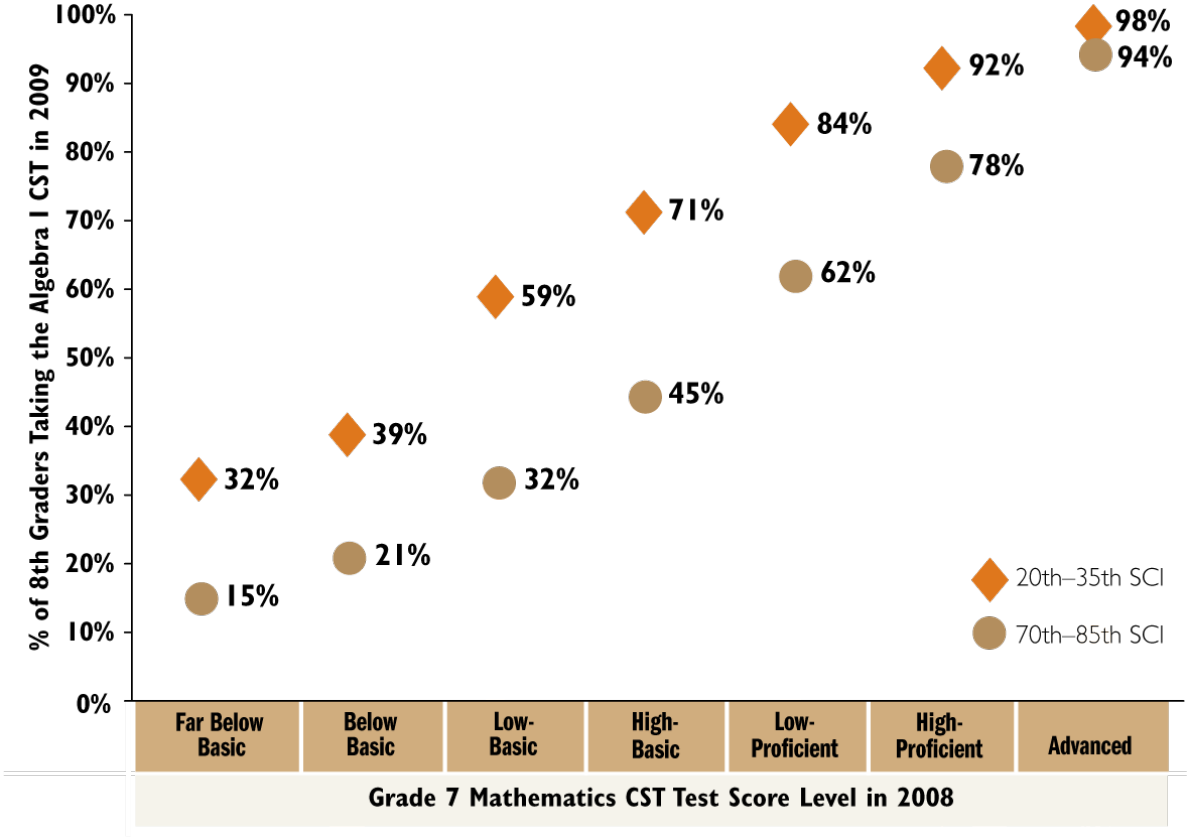
Many 8th graders at low levels of preparation were placed into Algebra I.



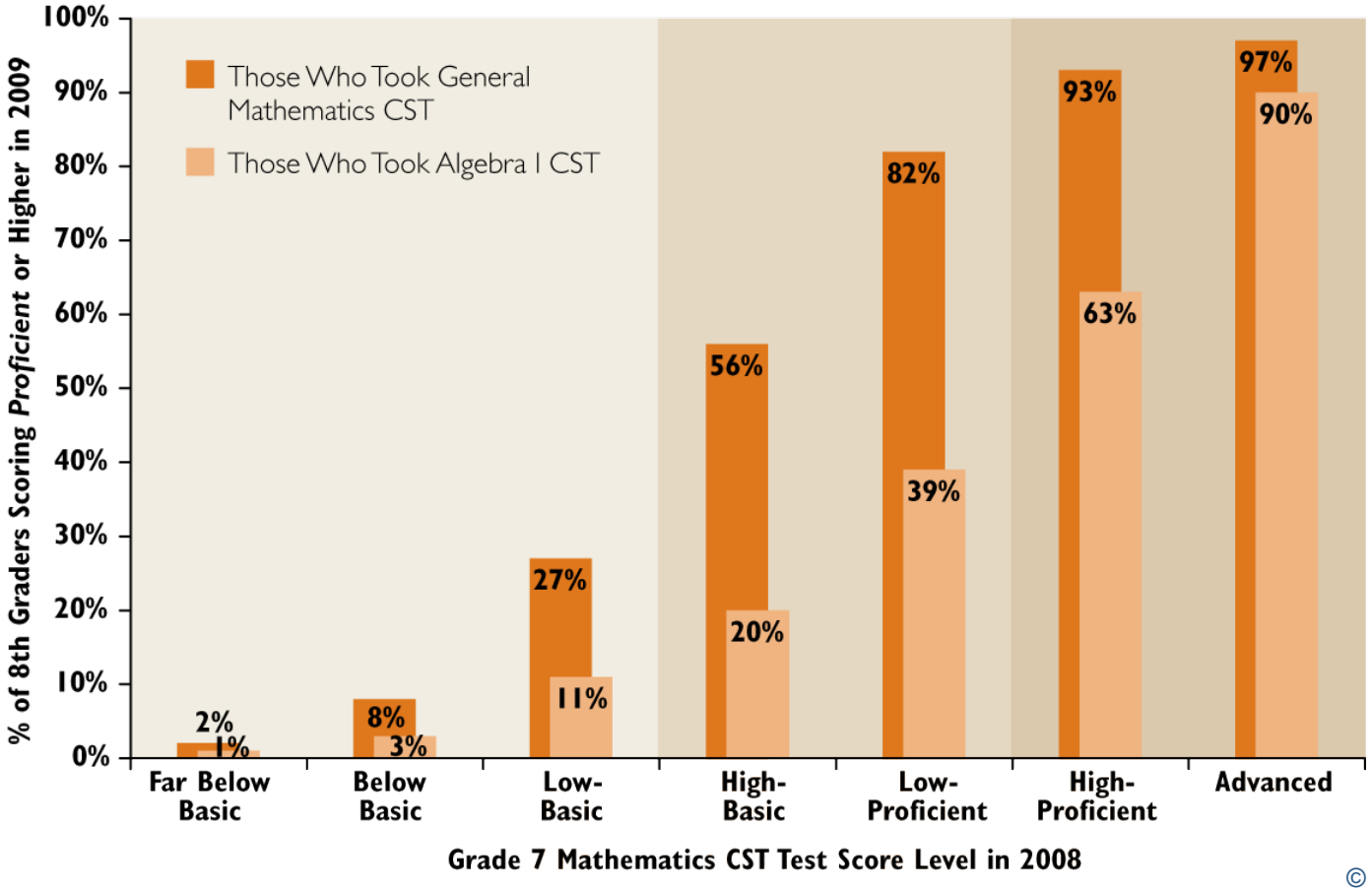
Findings from our placement analysis

- **Schools serving mostly low-income students placed greater percentages of 8th graders into Algebra I than did schools serving mostly middle-income students.**

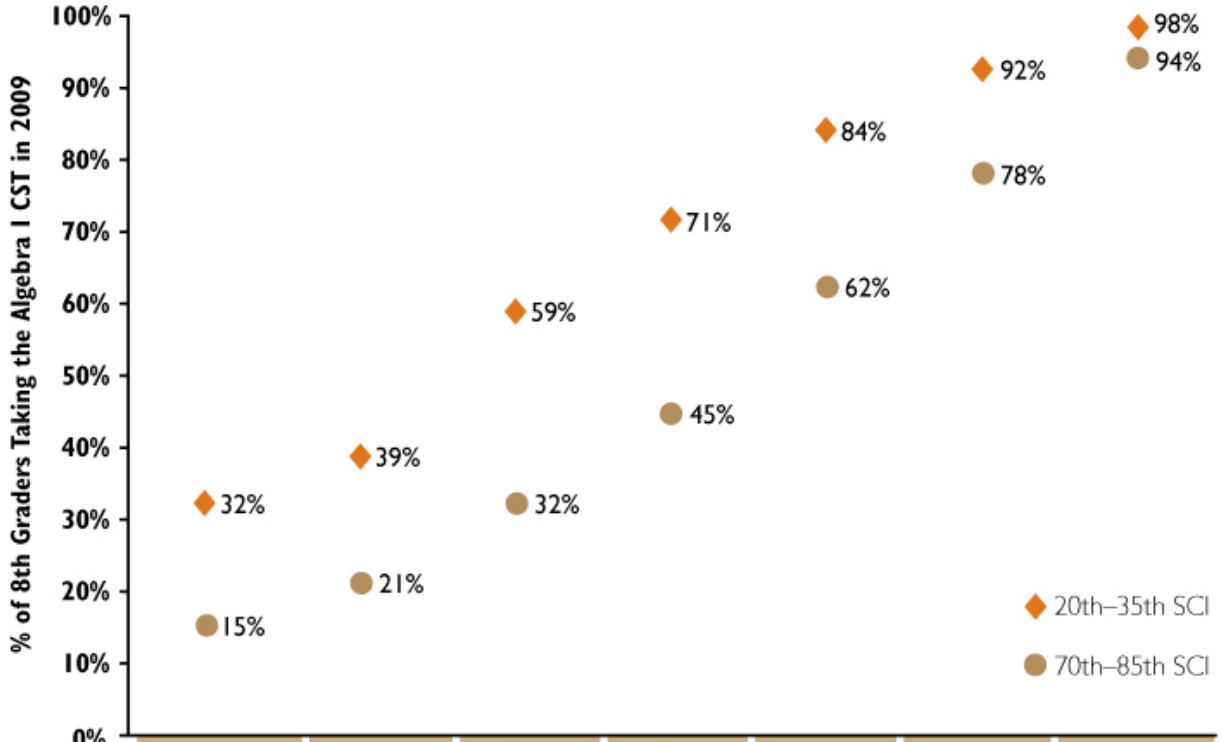


Findings from our placement analysis

Students' 7th grade scores were a strong predictor of their 8th grade scores the following spring.



A closer look



	Far Below Basic	Below Basic	Low-Basic	High-Basic	Low-Proficient	High-Proficient	Advanced
	Grade 7 Mathematics CST Test Score Level in 2008 Number of Students Below						
20th–35th SCI	2,707	8,819	6,113	5,715	4,925	4,449	2,896
70th–85th SCI	1,094	4,758	4,326	5,196	5,370	6,815	6,480

Upshot:

Access and equity are a **system** challenge.

- California schools that serve predominantly students from lower-income families have heard and are answering the call for greater access to Algebra I in 8th grade.
- But these educators make decisions about student placement and instructional support in the context of longstanding achievement gaps that set the stage for many students to struggle in the course.

➢ ***This is a <u>system</u> challenge.***

Learn more

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- **This algebra placement analysis**, the prior *Gaining Ground in the Middle Grades* study, and our new *Middle Grades Action Kit*.
- ***California's Math Pipeline*** issue briefs, developed for the California STEM Learning Network.
- ***Passing When It Counts***, a new brief on math course success at California's community colleges.
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