

# Are Illinois Students Cheated By Low Math Standards?



by Matthew Greenberg and Jonina Lerner, Partners, SelectivePrep

**A**t a time when attaining high levels of mathematical fluency has become critical to academic and career success, Illinois is close to the bottom in setting goals for math knowledge. While the Illinois Standards Achievement Test (ISAT) performance of Chicago Public School (CPS) students

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has climbed dramatically over the past several years, actual math aptitude has stagnated at abysmal levels. Low Illinois elementary school math standards threaten a student’s chances

for subsequent math achievement — and can lull parents into complacency by letting them believe that their child has mastered math when his/her child’s actual skill level is low.

SelectivePrep believes that standards can be a useful means of measuring performance only when set at a meaningful level. But a larger question remains. If our primary goal is achieving some level of proficiency rather than excellence — will students ever attain first class skills to successfully compete on a global basis?

Below are four key facts about standards that every Chicago area elementary school parent should be aware of.

## **Fact #1: Illinois math standards are among the very worst (46th out of 50 states)**

Each state was graded by Education Next, a Harvard based research group, which compared the percentage of students deemed proficient on state tests with the percentage deemed proficient according to the National Association of Educational Progress (NAEP). The NAEP, also known as the Nation’s Report Card, is viewed as the “gold standard” of assessments — its measurements

**Figure 1. Illinois Math Standards — 2010 Rating**

Ranking	State	4th Grade Math "Grade"	8th Grade Math "Grade"
<b>46</b>	<b>Illinois</b>	<b>D</b>	<b>D-</b>
<b>47</b>	Michigan	F	F
<b>48</b>	Alabama	F	F
<b>49</b>	Nebraska	F	F
<b>50</b>	Tennessee	F	F

Source: Education Next, Fall 2010

are considered to be valid national and international benchmarks.

Although many students are considered proficient according to Illinois standards, these same students score poorly on national proficiency tests, so Illinois was given a low score on Education Next’s A through F grading scale — as shown in Figure 1 above.

who “meet” or “exceed” standards can do so with a limited understanding of core math content.

These standards also drive the curriculum that is taught at each grade level. Students who are working at “grade level” in Illinois may effectively be below grade level in other states. Illinois students who are in advanced programs may only be at grade level elsewhere.

**Figure 2. NAEP vs. ISAT Math Performance, 2003-2009**

	2003	2007	2009
<b>CPS 8th graders meeting or exceeding standards (ISAT)</b>	32%	71%	74%
<b>CPS 8th graders performing at or above proficiency (NAEP)</b>	11%	13%	15%

Source: National Association of Educational Progress (NAEP)

As you can see in Figure 2, from 2003 to 2009, the percentage of 8th grade CPS students meeting ISAT standards has more than doubled, but the percentage of students meeting NAEP standards has inched up only slightly.

Since the hurdle set for attaining math knowledge in Illinois is set so low, students

Since Illinois standards help determine what textbooks are used, how each topic is taught, and the level of depth or rigor demanded in each topic area, the “hidden” impact of low standards is a watered down curriculum – which in the long run may be even more damaging than a too easy assessment.

**Fact #2: Illinois students have to answer only about 40-45% of math questions correctly to “meet standards”**

In Figure 3 we’ve outlined the percentage of ISAT math questions that students needed to answer correctly to “meet standards” in 2009.

Since there are four answer choices on the ISAT, a student randomly filling in the grid can expect a “chance score” of 25% correct.

**Figure 3. Illinois Math Standards — 2010 Rating**

Grade Level	3rd Grade	4th Grade	5th Grade	6th Grade	7th Grade	8th Grade
% math questions correct to “meet standards”	46%	44%	46%	46%	43%	39%

Source: John Wick, Former Director of Research & Evaluation, CPS

Figure 3 shows that an 8th grader needs to get only 14% more questions correct than a “blind guesser” to meet Illinois math standards.

**Fact #3: Since the ISAT sets *minimal* competency standards, results say little about skills mastery**

CPS schools often boast about the percentage of their students who meet or exceed state standards. However these standards are so low that even if 100% of a school’s students meet or exceed standards, that statement says nothing about whether any of these students actually know math. It only means that students have achieved a minimal level of proficiency.

ISAT scores provide little information to students well above the proficiency level since the ISAT test does not gather meaningful information about higher level math performance. If a student takes a difficult test, then a score in the top 5% means that a student has mastered challenging material. However, on an easy test like the ISAT a student in the top 5% may or may not have mastered difficult material since that type of material has not been tested and may not even be part of the curriculum. In addition, an easy test can also lead to a disparity in knowledge among students at high scoring levels. A student in the top 5% can have a distinctly different grasp of math than another at that same percentile.

**Fact #4: A CPS 8th grader who just meets math standards has little chance of succeeding in high school and college math.**

A 2008 study completed by the Consortium on

Chicago School Research (CCSR) compared the performance of students at various levels on the ISAT with their subsequent ACT (American College Testing Program) scores. It showed that an 8th grade student with an ISAT scale score of 250 (the score for “meets standards” is 246), has only about a 5% chance of achieving a 20 on the ACT as an 11th grader. Even 8th grade students who are in the “exceeds” category with an ISAT score of 288 have only a 62% chance of reaching 20. CPS has set a goal of 20 for math on the ACT, since students with an ACT score of 20 may be accepted by an Illinois state university. Note that this score is below the math readiness score set by the ACT organization of 22.

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College Readiness Benchmarks for the ACT represent median test scores that are predictive of student college success. Success is defined as a 50% or higher probability of earning at least a B in the corresponding college course.

To have a good chance at reaching the ACT minimum math readiness level of 22, Illinois 8th graders must score at least a 297 on the ISAT math test. Only 9.2% of CPS 8th graders reach this goal. So over 90% of CPS students leave elementary school with math skills that are inadequate for college success.

## ACT College Readiness Benchmarks

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### Common Core Standards to the Rescue?

In July 2010, Illinois signed on to the Common Core Standards (CCS), an initiative endorsed by the Obama administration to provide a consistent set of national standards. Forty-two states have announced their intention to adopt CCS. CCS adoption could provide significantly greater rigor in assessment and curriculum, though any change in math performance will depend on how well these new standards are implemented in the classroom. Unfortunately, CCS based assessments are not scheduled to be in use until the 2014-2015 school year.

In the meantime, given the dubious nature of Illinois standards, it is difficult for elementary school parents to accurately judge whether their children are gaining world-class math skills and are sufficiently prepared for high school and beyond.

### Moving Beyond Standards

Regardless of how rigorous CCS will or will not be, SelectivePrep believes that the pursuit of excellence has gotten lost in the goal of “meeting” or “exceeding” standards. Although it’s difficult to benchmark excellence, we feel that students should strive to be the best, not just good enough. In the face of growing global competition, perhaps this pursuit is the only way to achieve academic and career success. Isn’t that the ultimate goal of any standards initiative?

SelectivePrep recommends that parents look for opportunities to do more. We encourage you to seek out math enrichment to continuously challenge your child beyond what he or she may be experiencing in the classroom.

In recent years, SelectivePrep has noted a trend in many of its students. Our students are motivated and score well on elementary school math benchmarks. Yet they often lack the true math fluency critical to high school and college math, and careers beyond. We have therefore expanded our offerings to include math enrichment courses such as the SelectivePrep Algebra Program.

### About SelectivePrep

SelectivePrep was founded seven years ago by Matthew Greenberg and Jonina Lerner, who combined have over 40 years of test preparation, teaching, consulting, and curriculum development experience. Mathematical competency is a vital skill that is assessed by nearly all standardized tests – and hence has always been an important component of SelectivePrep’s programs. The company was built on the principle that learning the concepts critical to superior math achievement can be both worthwhile and fun. We believe in conveying all math principles, even the most advanced, in a straightforward fashion. SelectivePrep builds students’ number sense and shows students how to get to the right answer quickly and painlessly.

SelectivePrep has experienced rapid growth each year, almost entirely from positive word-of-mouth. We believe that students must master the most rigorous portion of each math topic to be truly proficient and do not rely on dubious test-taking “tricks” in our programs to boost students’ scores.

For additional information and registration go to [www.selectiveprep.com](http://www.selectiveprep.com) or call (312) 409-8411.