How to Dumb Down Tests and Associated Curriculum Chris Jenner (<u>cjenner01@yahoo.com</u>) April 24, 2007

- 1. Lower the required score to categorize a student as meets / exceeds expectations.
- 2. Provide additional assistance to students, such as calculators, formulas, rulers, additional time.
- 3. Allow subjective manipulation of scores.
- 4. Keep standards vague and very open to interpretation.
- 5. When calculating group averages, exclude scores of students meeting certain criteria that would likely bring the scores down.

Would a state really do these things, then claim to be "Second to None" in education? Looking at the history of the Illinois State Achievement Tests since their introduction in 1999, the answer is a resounding yes! The mathematics section of the ISAT provides a clear example. It would have been a shock and an embarrassment if results on the 2006 ISATs did anything other than skyrocket.



1. Lowering the score for meeting or exceeding expectations

In 2005, the Illinois State Board of Education commissioned a "bridge study" that resulted in different grading scales ("cut points") in 2006 than had been used from 1999 through 2005. The report on the study is at <u>http://www.isbe.state.il.us/assessment/pdfs/Bridge_Study.pdf</u>. Most of the report is in statistician-speak. There is a paragraph that hints at what changing the scales was intended to accomplish:

"The appropriateness of the 8th-grade cutoffs for mathematics has been questioned for some time. This arises first from the large discrepancies across grades in the percent of students above the meet cut point. In 2005, for example, the percentages of students meeting or exceeding state standards was 70% at grade three, 73% at grade five, and 54% at grade 8."

8th grade math scores were too low. So the scales were changed to bring them in line with 3rd and 5th grade rates of meeting or exceeding expectations. Below are the actual scales used for defining student performance levels since the ISATs were introduced.

Here are the scoring ranges for the four student performance levels from 1999 (source: http://www.isbe.state.il.us/assessment/pdfs/isat_guide_1999.pdf)

Table 4 Scale Score Ranges That Define ISAT Student Performance Levels					
Grade	Academic Warning	Below Standards	Meets Standards	Exceeds Standards	
	MATHEMATICS				
03	120-141	142-152	153-172	173-200	
05	120-137	138-157	158-190	191-200	
08	120-137	138-161	162-184	185-200	
10	120-138	139-157	158-187	188-200	

To make the ranges more understandable to average parents, ISBE's scale of 120 - 200 is translated in the table below to a scale of 100.

Grade	ade Academic E		Meets	Exceeds
	Warning	Standards	Standards	Standards
03	0-26	27-40	41-65	66-100
05	0-21	22-46	47-87	88-100
08	0-21	22-51	52-80	81-100

Note that the same table was used for the 2005 ISAT scoring. From http://www.isbe.state.il.us/assessment/htmls/ISAT_cut_points_05.htm:

Student Assessment

2005 ISAT Scale Score Cut Points

MATHEMATICS (ISAT and IMAGE) (Scale = 120-200)

GRADE	Academic Warning	Below Standards	Meets Standards	Exceeds Standards
3	120-141	142-152	153-172	173-200
5	120-137	138-157	158-190	191-200
8	120-137	138-161	162-184	185-200
10*	120-138	139-157	158-187	188-200

* The grade 10 ISAT is no longer given.

Checking the Guides to the Illinois State Assessment, the same scale was used for 2000 through 2004 as well. Now look at the table for 2006. From

http://www.isbe.state.il.us/assessment/pdfs/cut_points_06.pdf

Scale Score Ranges That Define Student Performance Levels on the 2006 ISAT Scales (Grades 3-8)

ISAT MATHEMATICS					
GRADE	Academic Warning (W) Level 1	Below Standards (B) Level 2	Meets Standards (M) Level 3	Exceeds Standards (E) Level 4	
3	120-162	163-183	184-223	224-342	
4	120-171	172-199	200-246	247-355	
5	120-179	180-213	214-270	271-369	
6	120-193	194-224	225-275	276-379	
7	120-206	207-234	235-280	281-393	
8	120-220	221-245	246-287	288-411	

Doing a similar translation as above, we get

Grade	Academic	Below	Meets	Exceeds
	Warning	Standards	Standards	Standards
03	0-19	20-28	29-46	47-100
05	0-24	25-37	38-60	61-100
08	0-34	35-43	44-57	58-100

ISBE has published the table for 2007. From

http://www.isbe.state.il.us/assessment/pdfs/cut_points_07.pdf

Scale Score Ranges	That Define Student	Performance Levels	on the 2007 ISAT	Scales (Grades 3-8)
				,

ISAT MATHEMATICS					
GRADE	Academic Warning (W) Level 1	Below Standards (B) Level 2	Meets Standards (M) Level 3	Exceeds Standards (E) Level 4	
3	120-162	163-183	184-223	≥ 224	
4	120-171	172-199	200-246	≥ 247	
5	120-179	180-213	214-270	≥ 271	
6	120-193	194-224	225-275	≥ 276	
7	120-206	207-234	235-280	≥ 281	
8	120-220	221-245	246-287	≥ 288	

It's the same as the 2006 table, but no top end for Exceeding Standards is shown. Is there no longer a maximum score a student can achieve on the stat math test?

If the tables for 2006 and 2007 aren't comparable to the tables for 1999 through 2005, how can the 2006 scores be compared to past scores? If the tables are comparable, the minimum score to be categorized as meets standards was lowered in 2006 -- from 41 to 29 for 3rd grade, 47 to 38 in 5th grade, and 52 to 44 in 8th grade.

ISBE has a process to keep the test questions at approximately the same difficulty, as noted in the Illinois State Assessment Technical Manuals, e.g.

<u>http://www.isbe.state.il.us/assessment/pdfs/isat_tech_2003.pdf</u>. With no change in teaching performance or student achievement, the lowering of thresholds alone would cause a significant increase in the number of students meeting or exceeding standards.

2. Provide additional assistance to students, such as calculators, formulas, rulers, more time.

The following information is from the ISAT Mathematics Sample Books at <u>http://www.isbe.state.il.us/assessment/math.htm</u>.

	Time	# of Questions	Aids
1999	Three 35 minute	90 (80 for 3rd grade) multiple	None
	sessions	choice	
		2 short-answer/problem-solving	
2000	Three 35 minute	80 (70 for 3rd grade) multiple	None
	sessions	choice	
		2 extended-response/problem-	
		solving	
2001	Three 40 minute	70 multiple choice	None
	sessions	2 extended-response/problem-	
		solving	
2002	Three 40 minute	70 multiple choice	None
	sessions	2 extended-response/problem-	
		solving	
2003	Two 45 minute	76 multiple choice (38 per	5th and 8th graders are
	sessions	session)	allowed to use
	One 40 minute session	2 extended-response	calculators,
			8th graders can use a
			formula card previously
			shown in class
2004	No	sample book on web site as of April,	2007
2005	No	sample book on web site as of April,	2007
2006	Three 45 minute	70 multiple choice	All students provided a
	sessions, any student	2 extended-response	metric / English ruler,
	still working after 45	3 short-response for 5th and 8th	5th and 8th graders are
	minutes can be given	grades	allowed to use
	10 extra minutes		calculators,
			8th graders are given a
			reference sheet
2007	Three 45 minute	70 multiple choice	Same as 2006
	sessions, any student	2 extended-response	
	still working after 45	3 short-response for 5th and 8th	
	minutes can be given	grades	
	10 extra minutes		

The "formula card" and "reference sheet" now given to 8th graders include formulas to calculate circumference, area, and volume, and the Pythagorean formula. Since 2003, 5th graders and older are not required to have addition or multiplication tables memorized, 8th graders don't need to memorize formulas. This would certainly take pressure off schools to teach students to have basic mathematical facts at their immediate disposal.

In 1999, 5th and 8th graders had 105 minutes to complete 90 multiple choice and 2 shortanswer/problem-solving questions, with no aids. By 2006, they had 165 minutes to complete 70 multiple choice, 2 extended-response, and 3 short-response questions; and could use calculators, rulers, and formula reference sheets. How could scores *not* increase dramatically?

3. Allow subjective manipulation of scores.

Instead of simply counting the number of correct answers, the state recently started giving answers to some questions more weight than others. Since response questions, in which students explain their answers, may be more difficult than multiple choice questions, they can be scored to count less in the student's final score.

An April 13, 2007, Chicago Tribune article by Diane Rado commented on a study done by Northwestern University Professor Emeritus John Wick, a member of the Illinois State Testing Review Committee.

"He found five 8th-grade students who got the same raw scores on the math test. But because of the weighting method, two of those students got different final scores. Four of them got scores that "met standards" on the test, but the fifth "exceeded" standards, which is supposed to reflect a higher achievement level.

Wick said officials could manipulate overall test scores by decreasing or increasing the number of extended-response items, making the items more or less difficult, or more liberally scoring those items. With the weighting added to the picture, students could show no real change in performance, but scores could artificially increase, he said."

4. Keep standards vague and very open to interpretation.

The Thomas B. Fordham Foundation did an assessment of learning standards across the 50 states in 2006. Overall, Illinois rated a C-, down from a C in 2000. Illinois' math rating actually improved over 2000, from a D to a C. The improvement was primarily due to "Performance Descriptors", which the ISBE published in 2002. Performance Descriptors add some specificity to otherwise vague standards.

From the Fordham Foundation's Illinois Report Card

(http://www.edexcellence.net/doc/Illinois.pdf): "In the lower grades, there are serious deficiencies in the treatment of arithmetic, a foundation skill, and calculator use is promoted beginning in the earliest grades. Then, implausibly, an early elementary standard calls upon students to "Solve one- and two-step problems with whole numbers using addition, subtraction, multiplication, and division." It is unclear how first- and second-graders could carry out division without the use of calculators or similar inappropriate technology."

How does the Illinois State Board of Education suggest schools teach to these standards? One example is Calculator Spelling -- having students spell words with their calculators upside down. The complete assessment is at: <u>http://www.isbe.state.il.us/ils/math/stage_F/6B_6C_8CF.pdf</u>. Calculator spelling (a quote from the assessment follows) may be a more extreme example, but it's an example of what the state is suggesting nonetheless. Descriptors and assessments for all grades and standards are at: <u>http://www.isbe.state.il.us/ils/math/capd.htm</u>.

CALCULATOR SPELLING

Part I: If you display the number 3045 on your calculator and turn the display upside down, you will see the word ShOE. Use this target number and create 3 complex number sentences that compute to 3045. Each number sentence must show multiple operations, exponents, parentheses, decimals and/or fractions. Keep in mind the order of operations and field properties as you create your sentences.

5. When calculating group averages, exclude scores of students that meet certain criteria that would likely bring the scores down.

From a March 28, 2007, Chicago Tribune article, "State uses test loophole; Relaxed rule lets schools dodge failure list", by Stephanie Banchero and Darnell Little:

"More than 13 percent of the math and reading tests taken by Illinois students last year were not counted under the No Child Left Behind law, more than three times the percentage exempted the previous year, according to a Tribune analysis of state data.

The federal reform is based on the premise that every child can pass state math and reading exams if given access to a good school. But more than 283,000 exams were discounted. Low-income and minority students, whom the law was designed to help, were the most likely to see their scores negated, according to the analysis of recently released 2006 school report card data.

The dramatic increase can be tied to the state's decision to relax a little-noticed provision of the federal law.

Under the reform, schools are judged only on the scores of students enrolled for a "full academic year." Each state is allowed to determine what constitutes a full year.

Until last year, Illinois schools were responsible only for students enrolled by Oct. 1 of that school year.

Now, students must be enrolled by May 1 of the previous school year for their score to count under the federal law.

The relaxation of the rules helped 53 schools, including 28 in Chicago, escape the federal failing schools list. Schools that land on the roster face a series of escalating sanctions, including allowing students to transfer to better campuses and offering free tutoring to those who remain.

The enrollment exemption is designed to avoid penalizing schools that have many students transferring in after the school year has begun -- often, children from homeless, migrant and low-income families.

But critics argue that the exemption leaves behind the very children the law intends to protect."

Summary

For the testing of elementary school students in math, between 2002 and 2007, Illinois

- lowered the threshold to rate students as meeting standards
- gave students additional time, allowed calculators and gave students formulas
- allowed for subjective manipulation of scores
- maintained weak state learning standards
- excluded scores of students NCLB is specifically designed to help

Since schools at least to some extent "teach to the test", what does that tell us about the education students are getting?

The federal NCLB law requires increasing percentages of students to meet or exceed standards, until all schools reach 100% by 2014. How low will the scoring scales have to be, how much help will students get, how easy will the tests have to be, and how many students will have to be "exempted" to achieve this goal? And if a goal of schools is to teach children enough to be able to pass these tests, how low will the rigor of academic programs be?

Taking all this dumbing down into account, it's hard to conclude anything other than by 2014, pretty much every child will be left behind.