The trouble with RANKING

Ranking schools by test scores does nothing to improve the quality of education

Recently, I wrote in jest that one way to improve a state's average SAT score would be to discourage students from applying to colleges that require the test. Scores would rise, and the state would subsequently be applauded for moving up the ladder of rankings on one of the most prestigious tests in the country. It was a joke, or so I thought.

A savvy reader who saw my comments in a national education publication sent a letter in response, saying he was somewhat surprised I did not realize such tactics actually are employed. The reader lived in a wealthy district that had recently merged with a poorer district. Students were actively discouraged by school officials from taking the SAT, the reader said, because of the concern that low achievers would depress the average score and, as a result, the district's SAT ranking in the region. And this downward spiral, district officials worried, would eventually depress property values.

Why would a district engage in such unethical and counterproductive behavior? The answer is simple but disturbing: to achieve a higher ranking and greater status.

Conventional wisdom tells us that a simple rank ordering by test scores of nations, states, districts, and schools can provide valid information about the relative strengths of their education programs. The fact is, however, that these rankings have more to do with student selectivity and poverty levels than they do with the quality of education and, therefore, provide misleading information about educational effectiveness.

Our preoccupation with rank ordering—in education as well as other areas of society—needs to be counterbalanced with an understanding of the inherent flaws in placing too much emphasis on where you stand in the most recent ranking.

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GOLD MEDALS AND SAT SCORES

To illustrate the point, consider the Olympic games. The top five medal winners in the 1996 summer Olympic games were the United States, with a total of 101 medals; Germany, with 65; Russia, with 61; China, with 50; and Australia, with 41. At first glance, it might seem reasonable to conclude that these countries have the most athletic citizens and the best training programs.

A simple ranking by total number of medals, however, places smaller countries at a distinct disadvantage. When we rank countries based on medals earned as a percentage of each nation's population, the United States drops from first place to 36th. Similarly, Germany drops to 19th place, Russia to 35th place, and China to 56th place. Australia remains in the top five with 2.27 medals per million population, second only to Jamaica, with 2.40. Rounding out the new top five are Cuba, with 2.25; Hungary, with 2.06; and Bulgaria, with 1.79. But concluding that these countries have the most athletic citizens or the best training programs is just as fallacious as the conclusions in the previous example. A high ranking might be due primarily to a country's superiority in one sport—such as swimming—or the multiple medals of a single athlete. The point is that the rankings give us no information about the reasons one country ranks

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high and another low and therefore are of little use in developing future athletic programs.

If rankings based on Olympic medals are irrelevant to program improvement, what can be said about the much more complicated task of interpreting the rank order of states, or schools, based on student test scores—and then attempting to formulate education policy based on these findings?

Consider, for example, the rankings of states based on average scores on the mathematics portion of the SAT in 1997. (See Ranking 1.) A quick analysis of these figures might lead you to believe the higher ranked states had had superior academic standards, a more challenging mathematics curriculum, or a teacher accountability system that ensures excellence. But there is a simpler explanation: In the higher ranked states, as few as 4 or 5 percent of high school graduates took the SAT, compared with 70 percent or more of graduates in some lower ranked states.

The reality is that the states where fewer students take the SAT have higher average scores because the students taking the test are more highly selected. The average score has little to do with the quality of education. Rankings without proper context (i.e., percentage taking the test) are not only misleading, but they also discourage schools from making concerted efforts to have more students take the SAT.

MATH AND POVERTY

Let us turn now to mathematics proficiency scores for public school eighth-graders on the National Assessment of Educational Progress (NAEP) test. (See Ranking 2.) Unlike SAT scores, which reflect the average of a selective group of mostly college-bound students, these scores are based on a test given to a sample of students that is more representative of the student population in our nation's schools.

The wide discrepancies between the state ranking based

RANKING 1: SAT MATHEMATICS AVERAGES BY STATE FOR 1997

AVERAGE SCORE	STATE	PERCENT OF GRADUATES TAKING SAT
601	Iowa	5
595	North Dakota	5
592	Minnesota	9
590	Wisconsin	7
578	Illinois	14
575	Kansas	9
570	South Dakota	4
570	Utah	4
568	Missouri	9
566	Michigan	11
560	Oklahoma	8
558	Arkansas	6
556	Tennessee	13
555	Alabama	8
553	Louisiana	10
551	Mississippi	4
548	Montana	22
546	Kentucky	12
543	Wyoming	12
539	Colorado	30
539	Idaho	15
536	Ohio	25
524	Oregon	50
523	Washington	46
522	Arizona	29
518	New Hampshire	70
517	Alaska	48
514	California	45
512	Hawaii	54
509	Nevada	32
508	Massachusetts	80
508	New Jersey	69
508	West Virginia	18
507	Connecticut	79
507	Maryland	64
502	New York	74
502	Vermont	69
501	Texas	49
499	Florida	50
498	Delaware	65
497	Indiana	57
497	Virginia	69
495	Pennsylvania	72
493	Rhode Island	70
488	North Carolina	59
481	Georgia	63
475	District of Columbia	60
474	South Carolina	56
511	NATIONAL AVERAGE	42

Source: The College Board, *News from the College Board*

RANKING 2: STATES RANKED BY MATHEMATICS PROFICIENCY

STATE RANKING BY MATHEMATICS SCORES FOR PUBLIC SCHOOL EIGHTH-GRADERS, 1992	PERCENT OF CHILDREN IN POVERTY, 1992
Iowa	12.6
North Dakota	15.2
Minnesota	18.4
Maine	19.3
New Hampshire	10.1
Nebraska	14.4
Wisconsin	14.0
Idaho	17.5
Utah	12.5
Wyoming	13.2
Connecticut	12.8
Colorado	16.3
Massachusetts	16.7
New Jersey	15.1
Pennsylvania	16.9
Missouri	19.5
Indiana	19.7
Michigan	21.8
Ohio	17.5
Oklahoma	21.8
Virginia	13.7
New York	23.3
Arizona	22.0
Rhode Island	15.6
Maryland	14.1
Texas	24.2
Delaware	12.0
Kentucky	24.9
California	22.7
South Carolina	25.1
Florida	24.4
Georgia	23.9
New Mexico	26.8
North Carolina	19.3
Tennessee	26.0
West Virginia	27.9
Hawaii	16.2
Arkansas	24.1
Alabama	23.6
Louisiana	34.5
Mississippi	32.9
District of Columbia	34.4

Sources: National Center for Education Statistics, *Education in States and Nations*, and The Annie E. Casey Foundation, *Kids Count Data Book*

on SAT scores and the ranking based on the eighth-grade NAEP scores are illuminating. Mississippi and Pennsylvania, for example, have gone in different directions: Mississippi, which ranked 16th on the SAT, ranks next to last on the eighth-grade math test; while Pennsylvania, ranked 43rd on the SAT, is 15th out of 42 states on the eighth-grade test. Similarly, Arkansas, which ranked 12th on the SAT, ranks 38th on the eighth-grade NAEP test, while Connecticut moves from 34th on the SAT to 11th on the eighth-grade comparison.

States are often praised or censured for their performance on tests like these. But is there any evidence that the eighth-grade NAEP ranking reflects the relative quality of education in the states? Like the results based on SAT scores, the rankings do not provide information on educational quality or how to strengthen it. In fact, the state ranking based on the eighth-grade test shows something altogether different: It shows a strong relationship between poverty rates and test scores. In other words, as you might expect, high poverty levels are directly associated with low test scores. New Hampshire, with the lowest percentage of children in poverty, ranks fifth in the test score comparison. Louisiana, with the highest proportion of children from poor families, ranks 40th.

The powerful influence of poverty is all too evident. And because of school finance inequities, students from low-income families often have the fewest resources devoted to their education. As Constance Clayton, the former superintendent of the Philadelphia Public Schools, once put it, "We must face every day the realities of the unequal hand dealt to our children and to our schools."

WHAT RANKINGS SHOW

These state rankings illustrate some key points. First, they show the powerful influence of student selectivity and poverty. Second, they show the idiosyncrasies of ranking by test scores. A state that ranks high on the SAT, for example, might rank low on NAEP for reasons that have nothing to do with the quality of education. Or, a state might rank high on both tests if it has low proportions of students taking the SAT *and* low poverty rates. Or, it might rank low on both tests if it has high proportions of students taking the SAT *and* high poverty rates. The point is that we can assign neither credit nor blame to schools based on the information provided by these state rankings.

I am not suggesting that the quality of education is unrelated to student performance on standardized tests. Carefully controlled studies show that the characteristics of education programs—such as teacher qualifications and class size—do have an effect on student achievement. But a ranking of states, districts, or schools by test scores is too crude a measure to offer any insight about the quality of education, because student selectivity and socioeconomic status overwhelm the educational environment as a determinant of test score rankings.

In short, test score rankings tell us quite a bit about the impact of student selectivity. They tell us about the impact of poverty. But they tell us little about the quality of schools or about the expertise and motivation of teachers. Perhaps most important, test score rankings tell us nothing about how to strengthen our schools. And that, in essence, should be the primary goal of any testing program. ❖