



Miami-Dade County Public Schools

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# RESEARCH BRIEF

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## Is There Something Else Wrong with the FCAT? A Closer Look at Reading Gains in Middle School

### The Precedent for Concern

Because 3rd Grade FCAT scores have a direct impact on promotion, the results for that grade level are released early by the State. When the FCAT results for 3rd Grade were released in May 2007, many people were troubled. Over 80% of the elementary schools in the Miami-Dade School District showed a decrease in the percentage of students scoring in Levels 3 and above in Reading. Similar trends produced an outcry across the state. After an 8 percentage point jump in the previous year, there was a statewide drop of 6 percentage points in 2007. These results were more than surprising and cast doubt on the soundness of the scoring process. After a careful review, the Education Commissioner announced that there did appear to be a problem in the scoring of the test and a rescaling of the 3rd Grade FCAT reading exam would be forthcoming.

This admission by the State, while honorable and praiseworthy, opened the door for many to question other aspects of the FCAT test, sometimes without just cause. It is apparent that, despite every effort to ensure the integrity and accuracy of the test, scores can be invalid and misleading. Even so, we should not let this disclosure by the State lead us to abuse our right of inquiry, blaming any unflattering test result on scoring error.

While it is clearly unfair to discount the overall precision and usefulness of the FCAT, some form of careful review of scores is nonetheless proper. The search for the same kind of irregular trends in the data that brought this type of problem to the surface is always warranted and should be welcomed. Any abnormalities revealed in the examination of the scores need to be made public so that the need for in-depth analysis can be considered. It is in that spirit that this paper presents some unusual patterns in the data for FCAT Reading at the middle school level.

### Beyond the Changes in School Grades

In 2007, the State changed the way it determined the grades for schools since, for the first time, two new components were considered. These new components included the percent of students scoring in levels 3 and above in *science* and the percent of students in the lowest 25% making gains in *math*. These additions meant a rescaling of the points needed for schools to achieve the various grade designations. Largely as a result of these and other grading scheme changes, the grades for schools this year showed a marked decline. For example, the number of 'F' schools increased from 21 last year to 82 this year across the state. While this type of decline in school grades may be typical when new factors are incorporated, it makes the

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grade distributions between the years no longer directly comparable. If we intend to investigate unusual data patterns, we must be sure that our observations are not confused with changes in the grading scheme.

For this reason, this study was confined to the grade components common across all of the last three years. Specifically, only those aspects of the grading scheme were considered in which schools were awarded one point for every percent of students (1) scoring in achievement levels 3-5 in Reading, (2) demonstrating learning gains in Reading, (3) in the lowest 25% of Reading making gains, (4) scoring in achievement levels 3-5 in Mathematics, (5) demonstrating learning gains in Mathematics, and (6) scoring 3.5 or above in Writing.

**Average Changes in Grade Components**

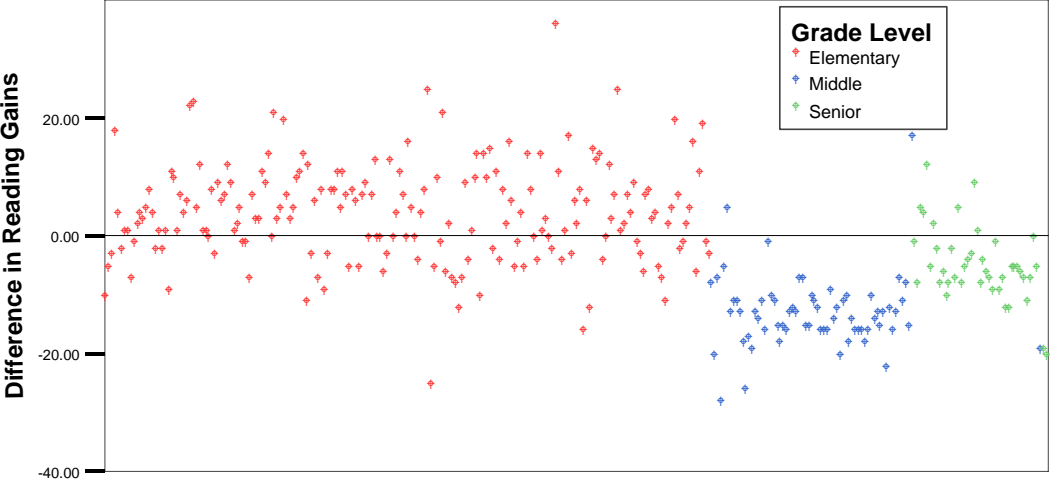
As a first step in monitoring the test performance in the district, it was reasonable to look at changes between last year and this year in the points awarded for each of the six consistently-used components of the school grading scheme.

	Elementary	Middle	Senior	All
High Reading	-2%	-1%	0%	-2%
High Math	1%	1%	0%	1%
High Writing	2%	2%	1%	2%
Reading Gains	3%	-14%	-5%	-2%
Math Gains	-4%	-3%	-3%	-3%
Lowest 25% Reading	0%	-12%	-6%	-3%

From this simple look at the data, two cells stand out. Compared to the other components and other school levels, Reading Gains and Lowest 25% Reading showed dramatic losses at the Middle school level. Note that both of these components are derived from the Reading test and both are gains-between-years compared to last year’s gains-between-years. These surprising findings naturally prompt the next question: Are these differences found at extreme levels in only a few middle schools or are they consistent throughout the district?

**Changes in Reading Gains by School**

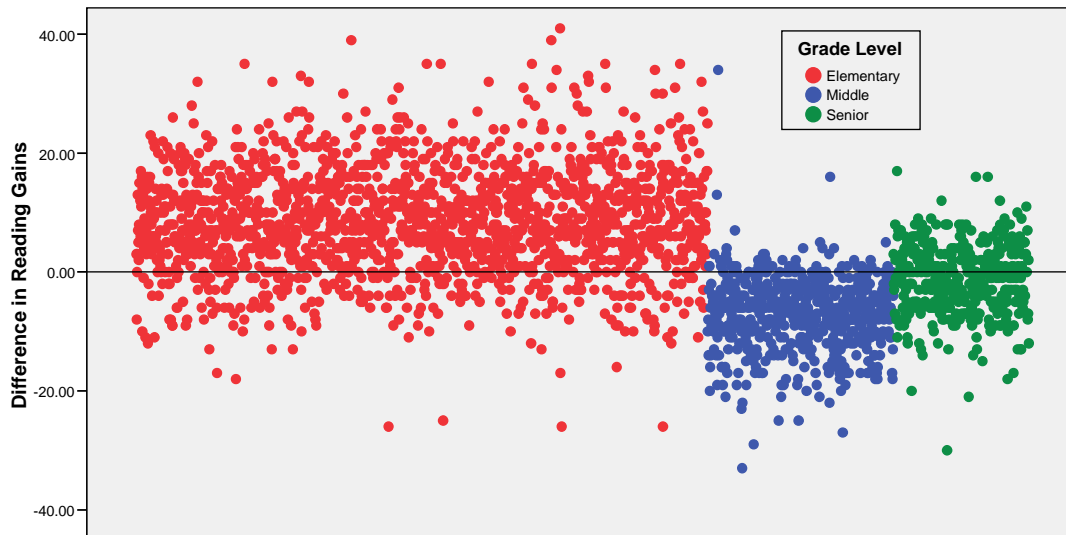
The graph below presents the difference in Reading Gains for each school in the district. The Elementary schools show mixed results, with most increasing their percent of students showing Reading Gains and some decreasing. Senior High schools are less positive. But Middle schools consistently show decline with only two schools showing increases (and one of those, the highest, is explainable by changes in the grade structure).



It's hard to believe that almost all of our Middle schools suddenly did worse this year in teaching reading skills. This graph represents changes in Reading Gains percentages; the graph for differences in the Lowest 25% of the Students making gains in Reading would look so similar that it is not necessary to repeat the picture here. These results lead to the next question: Is this a phenomenon only in Miami-Dade schools?

### Changes Across the State

In the following graph all of the schools in the state are depicted. It can be seen here that the same pattern is observed throughout the state. Less than 8% of the Middle schools in the entire state show increases in Reading Gains (and the great majority of those gained only one or two points). Once again, the picture for Gains in the Lowest 25% is strikingly similar.



### Where to Go From Here

On this scale it now defies credulity that virtually all of the Middle schools across the state have somehow dropped the ball when it comes to teaching Reading. The logical conclusion is that something strange has happened in the tests.

The test for each grade level in Middle school should be examined. Because these gain measures involve changes between years, it is difficult to pinpoint any particular faulty test. It may be that the apparent gains across the previous two years were "inflated" in a manner similar to the problem involving 3rd grade. For instance, the change in the percent of students scoring at levels 3 and above jumped **8 percent for grade 3** (from 67% to 75%) between 2005 and 2006. This kind of performance disparity alerted the state to possible problems with equating test difficulty. It is worth noting that the change in percent of students scoring at level 3 and above between the same years was **also 8 percent for grade 6** (from 56% to 64%) **and grade 7** (from 53% to 64%). Dramatic inflated gains in 2006 might explain the almost total absence of gains observed in 2007.

Without access to item-level data on the FCAT, districts can only speculate about potential scoring problems and their effects on setting cutscores and grade designations. Clearly no test is perfect and, no matter how carefully constructed, standardized tests can not exactly reflect academic progress. Suspending judgement about any wrongdoing, it is reasonable to call upon the State to explain these anomalies at the Middle school level in Reading.