

RESEARCH BRIEF

Department of Research Services

IVol. 0208
June 2003

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Developing Local Norms for the FCAT

Abstract

*This paper proposes the adoption of two new ways of reporting FCAT results: a **Status Norm**, providing the percentile standing of the student relative to the other students in the district, and a **Gain Norm**, providing the student's percentile standing of gains-beyond-expectation for the student's grade level. The dangers of using simple differences between yearly scores for representing gains are discussed, and a correction technique for regression-toward-the-mean is provided. These norms can be aggregated and disaggregated to provide average percentile standings for classrooms, grades within schools, and whole schools. As an illustration of their potential usefulness, the Status and Gain Norms for FCAT Reading and Mathematics for all schools in the District are provided in the appendix.*

Reporting Test Results

In the reporting of individual student results from standardized tests, the percentile rank of the student is probably the most common and useful indicator. For many years, standardized test results in Miami-Dade County Public Schools were reported in terms of the student's percentile rank relative to a national norm. Although some mental accommodation had to be made with respect to the national norming group being different than our district, the scores were still readily interpretable. Telling a parent, teacher or other interested party that a student scored at the 64th percentile was easy for everyone to understand -- 64 percent of the reference group had scores lower than this student. These types of scores were also aggregated over certain defined groups and were reported in the same type of scale. So, for example, a particular school's fifth grade average (median percentile) on the test may have been reported as the 54th percentile. The ease of interpretation made this kind of reporting scale ideal.

FCAT Scale Scores

With the coming of the Florida Comprehensive Assessment Test (FCAT), the picture changed. There is still a component of the FCAT that is “norm-referenced” (FCAT NRT), and students’ scores are still reported in reference to a national norming group. However, the part of the FCAT that gets more attention -- the part that is involved with the grading of the schools, graduation requirements, and retention decisions -- is not norm referenced. Specifically, the FCAT Sunshine State Standards (FCAT SSS) is a “criterion referenced” test, designed to assess levels of student proficiency as they relate to specific performance benchmarks in reading and mathematics. The students’ “scale scores” on these tests are reported as derived numbers ranging from 100 to 500; however, the scale scores are unique to each subject area and grade level. Thus, a 300 on the Mathematics test does not mean the same as a 300 on the Reading test. Furthermore, a student who is told he scored 350 last year and 350 this year cannot be sure if he has gone down, stayed the same, or gained in achievement standing. Because each grade level has its own score distribution, it is difficult to interpret the achievement indicated by the scale scores directly.

Achievement Levels

To help in interpretation, the scale scores have been broken down into five Achievement Levels. These Achievement Levels have broad interpretations from (Level 1) “student has little success with the challenging content” to (Level 5) “student has success with the most challenging content.” Although this provides a minimal framework for explaining performance, the fact that the levels have different cutoff scale scores for each grade level and test complicates the issue. It seems that the easy interpretations of achievement provided by a percentile norm scale are missed and would be a welcome addition.

Local Norms

Even though the FCAT SSS tests were not designed as norm-referenced tests, there is nothing that precludes the creation of norms. National norms are, of course, out of the question, and the data are not currently available for the calculation of Statewide norms. However, it is possible to create norms referenced to our District as a whole. This type of “local norm” is often recommended, even in situations where national norms are already available. In a district with the unique demographics of Miami-Dade County, local norms become even more desirable. They allow for comparisons in achievement levels within the similar circumstances and common resources of the District.

Status Norm & Gain Norm

This paper introduces two types of district-level norms: a “what-you-know” Status Norm and a “how-you-grow” Gain Norm. Each will provide percentile standing interpretations of the performance of students on the FCAT SSS Reading and Mathematics tests. These norms can be aggregated and disaggregated to provide average percentile standings for classrooms, grades within schools, and whole schools. In this way, these norms will augment our understanding of academic achievement as measured by the FCAT.

Demonstration Data

For purposes of this discussion, the data used will be the FCAT SSS Reading test results for 5th Grade in 2001-02 and 4th Grade in 2000-01. Of course, in the actual calculation of the Status and Gain Norms for use by the District, all grade levels from the current and previous year would be

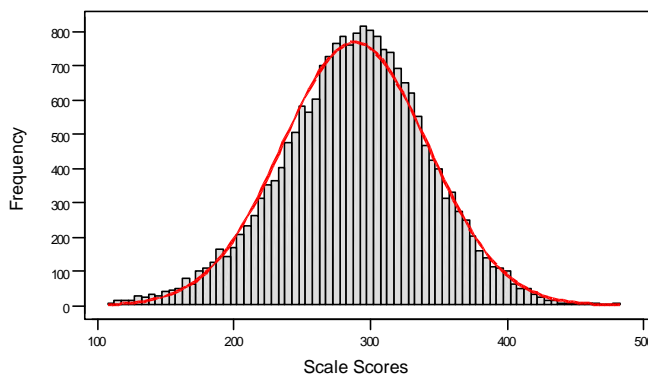
involved for both Reading and Mathematics. Such calculations for the most recently available test data have been conducted and summary norms by school are included in an appendix to this report.

As a technical detail, there is an accumulation of scores at the extremes of the test scale -- that is, at a score of 500 and, especially at a score of 100. These “ceiling” and “basement” effects distort the overall shape of the distributions and are removed from those calculations that involve distribution estimates. However, all students with valid FCAT test scores are provided with corresponding percentile norms.

Creating the Status Norm

The calculation of the Status Norm is a rather straightforward process. First, the scale scores for each grade level are examined. For example, the graph of the scores for 5th Grade Reading is displayed below.

Histogram of 2001-02 FCAT Reading
Grade 5, with Normal Curve



Normal Curve Approximation

From this graph, it is easy to see how closely the normal curve approximates the score distribution. This supplies us with a shortcut to the calculation of percentiles. The scale scores are turned into “z-scores” -- that is, normalized scores with a mean equal to zero and a standard deviation equal to one. These z-scores are then referred to the standard normal distribution for their percentile equivalents.

An Example Status Norm

To demonstrate, suppose an individual student has a scale score of 295, where the grade-level mean is 288 and the standard deviation is 53. Subtracting the mean from the score and dividing by the standard deviation yields the student’s z-score.

$$(295 - 288) / 53 = .132$$

Referring this z-score value to a table of percentile equivalents found in any introductory statistics book returns a Status Norm equal to the 55th percentile. In other words, this student’s performance is better than 55 percent of all the other students at the same grade level in the district. This procedure is duplicated for each student, using the appropriate mean and standard deviation for each grade level.

Developmental Gains

Getting the Gain Norm is a little more involved. Besides scale scores at each grade level, the State has provided “developmental” scores on a scale that spans all grade levels. These developmental scale scores are linear transformations of the regular scale scores, and range from 0 to

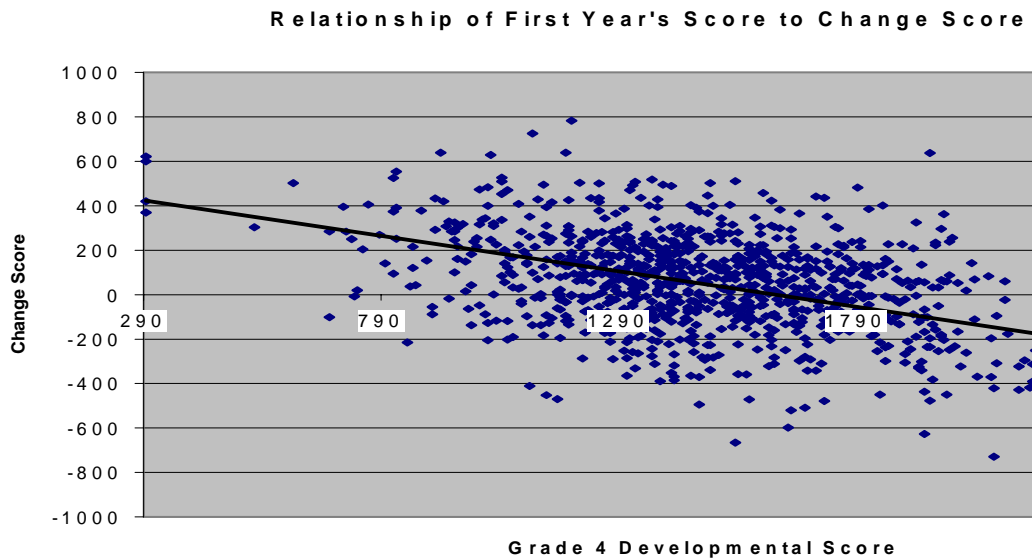
3000, with each grade level scoring at a higher position than the previous grade level. It would be nice if we could just subtract last year's developmental score from this year's developmental score and get a measure of how much a student has gained. Unfortunately, this is not an acceptable procedure.

Regression Toward the Mean

Whenever we look at simple change scores, as in this case from one year's developmental score to the next, we have to contend with a phenomenon referred to as "regression toward the mean." Unless the two types of scores are perfectly related such that the second score can be exactly predicted from the first, there will be some tendency for those who scored below average on the early score, to score closer to average on the subsequent score. The same thing happens at the other end of the scale, with high scoring individuals scoring less high on the later occasion. Among the causes of this phenomenon are measurement imprecision, construct instability, variation in expression of the underlying trait, and, in general, anything that contributes to the imperfect evaluation of true change. This is a perfectly natural occurrence that happens in all kinds of settings. The result is a tendency toward an **artificial** increase in initially low-scoring students and decrease in initially high-scoring students.

Regression in FCAT Scores

We can see this mechanism at work in the FCAT developmental change scores. Below is depicted the relationship between developmental scores in 4th Grade and the corresponding change in score in the 5th Grade for 1000 random students.



Notice that the lower scoring students in 4th Grade are more likely to have high positive gains and the higher scoring students are more likely to have actual losses in developmental score. What we see in this graph is more than just a particular relationship among FCAT scores. The same tendencies can be observed in all investigations of change -- those who start relatively lower will have a tendency to gain relatively more.

Evidence of Regression Effect

If we don't account for this artificial effect, we will be led to serious misinterpretations of the data. In the context of FCAT scores, this phenomenon will make low-scoring students appear to make much greater gains than high-scoring students and will make F schools appear to gain much more than A schools. Consider the following table showing average gain scores grouped by the previous year's Achievement Level.

FCAT Reading 2002 Average Change Score					
	Level 1	Level 2	Level 3	Level 4	Level 5
Grade 4	371	296	264	179	-112
Grade 5	166	68	44	-13	-232
Grade 6	194	121	91	49	-89
Grade 7	207	97	83	41	-74
Grade 8	242	171	131	58	-153
Grade 9	71	1	2	-20	-142
Grade 10	195	125	86	18	-139

Unbelievable Trends

At every grade level there is a consistent pattern in these simple change scores: the lower the starting Achievement Level from the previous year, the greater the gain in the current year. While it might be nice to assume our lower-scoring students are, indeed, gaining more, the idea that our Level 5 students at every grade level are actually losing ground in developmental scores defies believability. This and other unrealistic trends consistently found in our data and the data of other districts is virtual proof of a substantial regression-toward-the-mean effect.

The Danger of Simple Change Scores

The presence of some unbelievable trends in the data invalidates other inferences from change scores, no matter how reasonable they may seem. The potential danger of being misled can be demonstrated with a simple example. Let's assume a fictitious "Froman Reading Program" was in existence in the 2001-02 schools year. The only requirement for enrollment is that the student must have scored in Achievement Level 1 in the previous year. Pulling 1000 random students from the 2001 Grade 4 data files into this simulated program we observe an average developmental change score of 165 points. Considering the average student in this grade level gained 74 points, the progress of the students in the reading program seems impressive. In fact, their average gain is greater than 65 percent of the rest of the students -- not bad, for a program that never existed. The apparent gain is attributable to the regression-toward-the-mean effect.

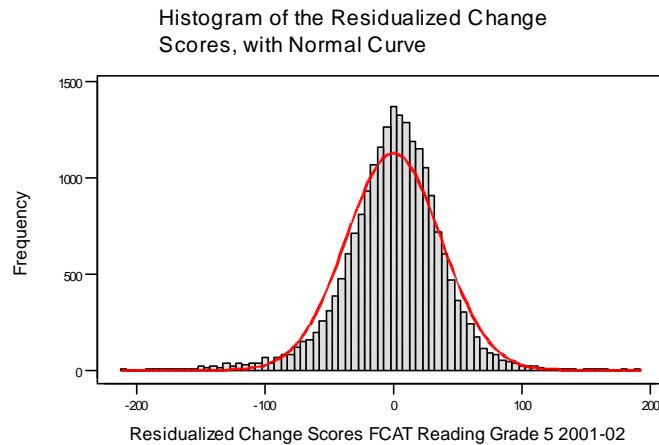
Correcting the Problem

The most common correction for the regression-toward-the-mean effect has been used for decades and, like many good ideas, has been reinvented many times in many circumstances. In this context, it would involve making a prediction for each student of the developmental score in the current year based on the developmental score in the previous year. Then, this prediction is compared to the actual developmental score obtained

by the student. The difference, referred to as the “residualized change score,” may be loosely interpreted as the degree to which the student has achieved beyond expectations for students scoring at the same point in the previous year’s distribution. In essence, this measure seeks to determine what the observed change would have been if everyone had started out equal on the previous year.

Applying this approach to the developmental scores for Reading 2001-02 from Grade 4 to Grade 5 yields the following graph.

Residualized Change Scores



Creating the Gain Norm

Once again, the normal curve approximates this distribution quite well. And, once again, these scores can be turned into z-scores and their percentile equivalents can be determined by reference to the standard normal distribution. These percentiles would constitute the Gain Norms.

An Example Gain Norm

For example, suppose a student has a predicted developmental scale score of 312 based on his score in the previous year. If his observed developmental score for the current year is 354, the difference ($354 - 312 = 42$) is his residualized change score. If the grade level mean for residualized change scores is zero (as it will always be) and the standard deviation is equal to 36, his z-score would be

$$(42 - 0) / 36 = 1.16$$

Referring this z-score value to the tabled percentile equivalents returns a Gain Norm equal to the 87th percentile. In other words, this student’s gain-beyond-expectation is better than 87 percent of all the other students at the same grade level in the district. This procedure is duplicated for each student, using the appropriate prediction equation and residual distribution for each grade level.

Evaluating the Approach

The use of residualized change scores restores some sense to the data. We no longer observe the patterns of low-score to high-gain that we found for simple change scores. Level 1 students no longer consistently out-gain Level 5 students and members of the fictional “Froman Reading Program” have gains-beyond-expectation no greater than the average student. However, this does not mean that we have perfectly purified the scores from the regression-toward-the-mean effect. Other approaches to correct-

ing for these problems have been suggested, and each approach has its adherents. However, the one we have employed here, residualized change scores, is the simplest and most common. It should be clear that not making any kind of correction would be a far more egregious error.

Summary Definitions

Two types of district-referenced norms have been introduced.

- *Status Norm: Using the current year's developmental score—the percentile standing of the student relative to all other students in the district at the same grade level.*
- *Gain Norm: Using the difference between the predicted developmental score and the current year's actual developmental score -- the percentile standing of the student relative to all other students in the district at the same grade level.*

Using the Norms

These norms are useful in this form to inform students, parents, teachers, and other interested parties of the relative performance of the individual students. The ultimate benefit of this type of score representation will depend on its availability. Being somewhat statistically strict, it is not quite proper to sum or average these percentiles. However, it is perfectly acceptable to average the z-scores that generated these percentiles, and then turn that average z-score into its percentile equivalent. In this way, meaningful averages can be produced for individual classrooms, schools, programs, and any reasonable classification scheme.

School Norms

To illustrate one potential use, the attached appendix to this report presents the average percentiles for the Status Norm and Gain Norm for both Reading and Mathematics for the 2001-02 administration of the FCAT by school. The simple expectation would be that a school would have roughly the same average percentile on all four of these norms. The 25 schools which most depart from this expectation with interesting patterns among the norms are indicated by an asterisk in the final column. By glancing at this appendix one can readily appreciate the explanatory advantages of these norms.

Perhaps the more important applications of local norms are found at a level closer to the individual student. If these norms were made available on the M-DCPS website as additional Student Performance Indicators, teachers could get a quick feel for the performance levels of their incoming students. And finally, students and parents would have an interpretation of their FCAT scores that would be immediately meaningful and useful.

APPENDIX

School #	School Name	Math Gain	Math Status	Reading Gain	Reading Status
0040	LIBERTY CITY CHARTER SCHOOL	44%	45%	49%	49%
0041	AIR BASE ELEMENTARY	48%	63%	64%	72% *
0070	CORAL REEF MONT. ACAD. CH.	44%	58%	55%	65% *
0071	EUGENIA B. THOMAS EL.	56%	62%	62%	56%
0081	LENORA BRAYNON SMITH EL.	40%	23%	30%	19% *
0100	MATER CENTER SCHOOL	56%	61%	56%	57%
0101	ARCOLA LAKE ELEMENTARY	37%	27%	39%	31%
0110	NORTH COUNTY CHARTER SCHOOL	11%	11%	23%	20%
0111	MAYA ANGELOU ELEMENTARY	33%	40%	41%	40%
0120	NORTHEAST ACADEMY	23%	36%	36%	51% *
0121	AUBURNDALE ELEMENTARY	38%	40%	44%	40%
0161	AVOCADO ELEMENTARY	52%	48%	47%	54%
0200	SPIRAL TECH EL. CHARTER SCH	30%	70%	55%	68% *
0201	BANYAN ELEMENTARY	58%	51%	52%	49%
0241	R.K. BROAD/BAY HARBOR EL.	62%	74%	64%	69%
0251	ETHEL KOGER BECKHAM EL.	50%	58%	58%	61%
0261	BEL-AIRE ELEMENTARY	37%	32%	41%	35%
0271	BENT TREE ELEMENTARY	54%	59%	53%	59%
0300	ROSA PARKS CHART. SCH/FLA C	24%	13%	35%	25% *
0321	BISCAYNE ELEMENTARY	55%	48%	54%	39%
0361	BISCAYNE GARDENS ELEMENTARY	59%	42%	53%	40% *
0400	RYDER ELEMENTARY CHART. SCH	20%	51%	43%	59% *
0401	VAN E. BLANTON ELEMENTARY	63%	38%	49%	33% *
0441	BLUE LAKES ELEMENTARY	34%	42%	41%	47%
0451	BOWMAN FOSTER ASHE EL.	55%	58%	51%	51%
0461	BRENTWOOD ELEMENTARY	52%	36%	37%	34%
0481	JAMES H. BRIGHT ELEMENTARY	52%	43%	35%	31% *
0521	BROADMOOR ELEMENTARY	38%	28%	37%	28%
0561	WILLIAM J. BRYAN EL.	48%	44%	46%	48%
0641	BUNCHE PARK ELEMENTARY	53%	52%	25%	37% *
0651	CAMPBELL DRIVE ELEMENTARY	38%	34%	38%	35%
0661	CARIBBEAN ELEMENTARY	27%	24%	38%	30%
0671	CALUSA ELEMENTARY	61%	69%	55%	67%
0681	CAROL CITY ELEMENTARY	50%	43%	33%	32%
0721	GEORGE W. CARVER EL.	41%	52%	47%	52%
0761	FIENBERG/FISHER ELEMENTARY	60%	55%	59%	42%
0771	DR. WILLIAM A. CHAPMAN EL.	36%	22%	38%	21%
0801	CITRUS GROVE ELEMENTARY	33%	39%	39%	31%
0831	CLAUDE PEPPER ELEMENTARY	43%	52%	54%	53%
0841	COCONUT GROVE ELEMENTARY	50%	50%	55%	60%
0861	COLONIAL DRIVE ELEMENTARY	38%	44%	39%	44%
0881	COMSTOCK ELEMENTARY	34%	23%	28%	21%
0961	CORAL GABLES ELEMENTARY	56%	72%	57%	70%
1001	CORAL PARK ELEMENTARY	57%	65%	60%	60%
1041	CORAL REEF ELEMENTARY	46%	66%	49%	67% *
1081	CORAL TERRACE ELEMENTARY	41%	48%	47%	44%
1121	CORAL WAY ELEMENTARY	50%	63%	55%	58%
1161	CRESTVIEW ELEMENTARY	54%	45%	52%	55%
1241	CUTLER RIDGE ELEMENTARY	50%	67%	53%	68% *
1281	CYPRESS ELEMENTARY	45%	70%	46%	62% *
1331	DEVON AIRE ELEMENTARY	69%	77%	63%	72%
1361	DOUGLASS, FREDERICK EL.	38%	23%	30%	19%

School #	School Name	Math Gain	Math Status	Reading Gain	Reading Status
1371	DOUGLAS, MARJORY STONEMAN	52%	58%	47%	55%
1401	CHARLES R. DREW ELEMENTARY	60%	55%	61%	52%
1441	PAUL LAWRENCE DUNBAR EL.	24%	19%	32%	23%
1481	JOHN G. DUPUIS ELEMENTARY	49%	37%	52%	42%
1521	AMELIA EARHART ELEMENTARY	65%	47%	55%	48%
1561	EARLINGTON HEIGHTS EL.	45%	30%	29%	26%
1601	EDISON PARK ELEMENTARY	24%	14%	25%	17%
1641	EMERSON ELEMENTARY	47%	58%	52%	58%
1681	LILLIE C. EVANS ELEMENTARY	34%	23%	26%	27%
1691	CHRISTINA M. EVE EL.	62%	61%	59%	57%
1721	EVERGLADES K-8 CENTER	53%	63%	55%	62%
1761	DAVID FAIRCHILD ELEMENTARY	53%	68%	57%	69%
1801	FAIRLAWN ELEMENTARY	45%	43%	43%	43%
1811	DANTE B. FASCELL EL.	52%	60%	53%	57%
1841	FLAGAMI ELEMENTARY	44%	47%	54%	47%
1881	HENRY M. FLAGLER EL.	40%	41%	51%	40%
1921	FLAMINGO ELEMENTARY	62%	60%	62%	54%
1961	FLORAL HEIGHTS ELEMENTARY	32%	26%	27%	22%
2001	FLORIDA CITY ELEMENTARY	42%	26%	31%	22%
2021	GLORIA FLOYD ELEMENTARY	40%	56%	50%	57%
2041	BENJAMIN FRANKLIN EL.	49%	30%	41%	33%
2081	FULFORD ELEMENTARY	58%	58%	55%	52%
2111	HIALEAH GARDENS ELEMENTARY	49%	47%	48%	48%
2151	JACK D. GORDON ELM. COMM.	50%	62%	54%	62%
2161	GOLDEN GLADES ELEMENTARY	50%	38%	42%	34%
2181	JOELLA GOOD ELEMENTARY	43%	46%	48%	51%
2241	GRATIGNY ELEMENTARY	44%	31%	44%	34%
2261	GREENGLADE ELEMENTARY	77%	76%	80%	74%
2281	GREYNOLDS PARK ELEMENTARY	52%	44%	47%	46%
2321	GULFSTREAM ELEMENTARY	43%	34%	42%	38%
2331	CHARLES R. HADLEY EL.	57%	61%	48%	49%
2341	JOE HALL ELEMENTARY	54%	58%	53%	59%
2351	ENEIDA MASSAS HARTNER EL.	32%	32%	38%	31%
2361	HIALEAH ELEMENTARY	31%	31%	39%	32%
2401	HIBISCUS ELEMENTARY	45%	35%	54%	48%
2441	V. BOONE/HIGHLAND OAKS EL.	60%	71%	59%	68%
2501	HOLMES ELEMENTARY	31%	21%	37%	26%
2511	ZORA NEALE HURSTON EL.	54%	51%	57%	54%
2521	OLIVER HOOVER ELEMENTARY	44%	50%	56%	58%
2541	HOWARD DRIVE ELEMENTARY	51%	64%	51%	64%
2581	MADIE IVES ELEMENTARY	51%	49%	46%	50%
2641	KENDALE ELEMENTARY	46%	53%	54%	60%
2651	KENDALE LAKES ELEMENTARY	43%	47%	42%	47%
2661	KENSINGTON PARK ELEMENTARY	46%	40%	45%	37%
2701	KENWOOD K-8 CENTER	58%	70%	63%	68%
2741	KEY BISCAIYNE K-8 CENTER	61%	69%	62%	68%
2781	KINLOCH PARK ELEMENTARY	55%	50%	49%	44%
2801	LAKE STEVENS ELEMENTARY	39%	34%	43%	37%
2821	LAKEVIEW ELEMENTARY	42%	30%	43%	36%
2861	JRE LEE EDUCATIONAL CENTER	14%	15%	22%	21%
2881	LEEWOOD ELEMENTARY	60%	75%	63%	79% *
2891	WILLIAM H. LEHMAN EL.	60%	68%	52%	61%

School #	School Name	Math Gain	Math Status	Reading Gain	Reading Status
2901	LEISURE CITY K-8 CENTER	29%	21%	31%	25%
2911	LENTIN, LINDA ELEMENTARY	56%	45%	42%	39%
2941	LAURA C. SAUNDERS EL.	29%	21%	30%	18%
2981	LIBERTY CITY ELEMENTARY	59%	30%	42%	33% *
3021	LITTLE RIVER ELEMENTARY	42%	20%	34%	21% *
3041	LORAH PARK ELEMENTARY	44%	41%	40%	34%
3051	TOUSSAINT L'OUVERTURE EL.	25%	18%	38%	22%
3061	LUDLAM ELEMENTARY	49%	64%	54%	69% *
3101	FRANK CRAWFORD MARTIN EL.	67%	84%	66%	83% *
3111	WESLEY MATTHEWS ELEMENTARY	61%	63%	60%	63%
3141	MEADOWLANE ELEMENTARY	58%	55%	60%	52%
3181	MELROSE ELEMENTARY	71%	53%	62%	46% *
3241	MIAMI GARDENS ELEMENTARY	48%	36%	46%	36%
3261	MIAMI HEIGHTS ELEMENTARY	56%	56%	60%	57%
3281	MIAMI LAKES ELEMENTARY	47%	62%	48%	63%
3301	MIAMI PARK ELEMENTARY	32%	23%	30%	27%
3341	MIAMI SHORES ELEMENTARY	33%	42%	46%	53%
3381	MIAMI SPRINGS ELEMENTARY	49%	62%	59%	59%
3421	MARCUS A. MILAM K-8 CENTER	51%	48%	52%	44%
3431	PHYLLIS R. MILLER EL.	48%	45%	44%	44%
3501	MORNINGSIDE ELEMENTARY	23%	24%	37%	28%
3541	ROBERT RUSSA MOTON EL.	38%	45%	43%	46%
3581	MYRTLE GROVE ELEMENTARY	52%	49%	56%	52%
3621	NARANJA ELEMENTARY	33%	28%	36%	30%
3661	NATURAL BRIDGE ELEMENTARY	58%	44%	39%	36% *
3701	NORLAND ELEMENTARY	30%	31%	36%	40%
3741	NORTH BEACH ELEMENTARY	62%	69%	59%	70%
3781	BARBARA J. HAWKINS EL.	25%	26%	30%	31%
3821	NORTH COUNTY ELEMENTARY	31%	33%	27%	26%
3861	NORTH GLADE ELEMENTARY	33%	27%	42%	34%
3901	NORTH HIALEAH ELEMENTARY	46%	37%	49%	39%
3941	NORTH MIAMI ELEMENTARY	46%	31%	46%	32%
3981	NORTH TWIN LAKES ELEMENTARY	67%	47%	50%	41% *
4001	NORWOOD ELEMENTARY	66%	59%	51%	51%
4021	OAK GROVE ELEMENTARY	61%	49%	46%	44%
4061	OJUS ELEMENTARY	64%	68%	63%	66%
4071	OLINDA ELEMENTARY	51%	52%	37%	44%
4091	OLYMPIA HEIGHTS ELEMENTARY	49%	59%	56%	57%
4121	OPA-LOCKA ELEMENTARY	39%	33%	46%	28%
4171	ORCHARD VILLA ELEMENTARY	42%	24%	45%	29% *
4221	PALMETTO ELEMENTARY	48%	67%	52%	70% *
4241	PALM LAKES ELEMENTARY	44%	45%	42%	41%
4261	PALM SPRINGS ELEMENTARY	49%	50%	53%	45%
4281	PALM SPRINGS NORTH EL.	50%	51%	50%	54%
4301	PARKVIEW ELEMENTARY	47%	32%	50%	42%
4341	PARKWAY ELEMENTARY	59%	46%	44%	44%
4381	PERRINE ELEMENTARY	43%	50%	52%	54%
4391	IRVING & BEATRICE PESKOE	38%	39%	44%	39%
4401	KELSEY L. PHARR ELEMENTARY	31%	25%	41%	25%
4421	PINECREST ELEMENTARY	45%	73%	45%	75% *
4441	PINE LAKE ELEMENTARY	31%	33%	33%	33%
4461	PINE VILLA ELEMENTARY	47%	31%	36%	28%
4491	HENRY E. S. REEVES EL.	31%	21%	33%	29%
4501	POINCIANA PARK ELEMENTARY	42%	30%	32%	24%

School #	School Name	Math Gain	Math Status	Reading Gain	Reading Status
4511	DR. GILBERT L. PORTER EL.	56%	59%	54%	58%
4541	RAINBOW PARK ELEMENTARY	38%	40%	45%	45%
4581	REDLAND ELEMENTARY	56%	57%	49%	54%
4611	REDONDO ELEMENTARY	72%	60%	45%	41% *
4651	E. F. BECKFORD/RICHMOND EL.	54%	57%	55%	51%
4681	RIVERSIDE ELEMENTARY	49%	31%	39%	27% *
4691	JANE S. ROBERTS K-8 CENTER	51%	66%	55%	67%
4721	ROCKWAY ELEMENTARY	47%	52%	54%	53%
4741	ROYAL GREEN ELEMENTARY	45%	42%	47%	42%
4761	ROYAL PALM ELEMENTARY	64%	63%	54%	58%
4801	G.K. EDELMAN-SABAL PALM EL.	50%	56%	52%	55%
4841	SANTA CLARA ELEMENTARY	29%	17%	31%	21%
4881	SCOTT LAKE ELEMENTARY	56%	51%	46%	53%
4921	SEMINOLE ELEMENTARY	75%	68%	64%	58%
4961	SHADOWLAWN ELEMENTARY	34%	24%	34%	24%
5001	SHENANDOAH ELEMENTARY	46%	37%	49%	36%
5021	BEN SHEPPARD ELEMENTARY	51%	45%	47%	40%
5041	SILVER BLUFF ELEMENTARY	30%	28%	41%	36%
5051	ERNEST R. GRAHAM EL.	49%	49%	52%	49%
5061	DR. CARLOS J. FINLAY EL.	34%	46%	44%	46%
5081	SKYWAY ELEMENTARY	45%	47%	60%	67% *
5091	SOUTH POINTE ELEMENTARY	69%	68%	59%	67%
5101	JOHN I. SMITH ELEMENTARY	59%	70%	58%	61%
5121	SNAPPER CREEK ELEMENTARY	45%	59%	48%	52%
5131	NORTH DADE CNTR. MOD. LANG.	52%	73%	61%	77% *
5141	HUBERT O. SIBLEY ELEMENTARY	59%	36%	50%	37% *
5201	SOUTH HIALEAH ELEMENTARY	46%	36%	45%	31%
5241	SOUTH MIAMI ELEMENTARY	50%	53%	53%	60%
5281	SOUTH MIAMI HEIGHTS EL.	41%	34%	37%	36%
5321	SOUTHSIDE ELEMENTARY	37%	62%	51%	47% *
5361	SPRINGVIEW ELEMENTARY	58%	70%	57%	63%
5381	E. W. F. STIRRUP EL.	49%	51%	56%	51%
5401	SUNSET ELEMENTARY	49%	72%	58%	72% *
5421	SUNSET PARK ELEMENTARY	50%	58%	49%	54%
5431	SWEETWATER ELEMENTARY	47%	48%	50%	46%
5441	SYLVANIA HEIGHTS ELEMENTARY	64%	54%	58%	54%
5481	TREASURE ISLAND ELEMENTARY	55%	50%	62%	44%
5521	TROPICAL ELEMENTARY	39%	38%	48%	42%
5561	FRANCES S. TUCKER EL.	61%	42%	62%	45% *
5601	TWIN LAKES ELEMENTARY	66%	58%	54%	45%
5641	VILLAGE GREEN ELEMENTARY	53%	65%	63%	67%
5671	VINELAND ELEMENTARY	51%	65%	49%	58%
5711	MAE M. WALTERS ELEMENTARY	56%	43%	55%	38% *
5791	WEST HOMESTEAD ELEMENTARY	33%	21%	28%	18%
5831	HENRY S. WEST LABORATORY	55%	73%	58%	76% *
5861	WEST LITTLE RIVER EL.	26%	25%	30%	24%
5901	WESTVIEW ELEMENTARY	50%	25%	41%	29% *
5931	PHILLIS WHEATLEY EL.	48%	33%	33%	28%
5951	WHISPERING PINES ELEMENTARY	60%	61%	55%	65%
5961	WINSTON PARK ELEMENTARY	46%	59%	52%	61%
5971	NATHAN B. YOUNG ELEMENTARY	25%	25%	46%	31% *
5981	DR. EDWARD L. WHIGHAM EL.	32%	38%	40%	45%
5991	CHARLES DAVID WYCHE, JR.	38%	47%	48%	48%
6001	HERBERT A. AMMONS MIDDLE	63%	77%	59%	77% *

School #	School Name	Math Gain	Math Status	Reading Gain	Reading Status
6010	FLORIDA INTERN'L ACADEMY	35%	25%	29%	26%
6011	ALLAPATTAH MIDDLE	25%	18%	30%	23%
6020	ASPIRA YOUTH LEADERSHIP C.S	41%	41%	39%	45%
6021	ARVIDA MIDDLE	53%	64%	53%	65%
6030	DORAL ACADEMY	51%	60%	53%	62%
6031	BROWNSVILLE MIDDLE	35%	22%	34%	25%
6040	M. SHORES/BARRY UNIV C.L.C.	63%	82%	70%	86% *
6041	PAUL W. BELL MIDDLE	42%	45%	51%	51%
6050	YOUTH CO-OP CHARTER SCHOOL	64%	74%	54%	67%
6051	CAROL CITY MIDDLE	23%	22%	36%	33%
6060	ASPIRA SOUTH YOUTH LEAD. CH	37%	29%	37%	31%
6061	CAMPBELL DRIVE MIDDLE	31%	25%	39%	32%
6070	ASPIRA E. M. DE HOSTOS L. C	33%	29%	28%	29%
6071	GEORGE W. CARVER MIDDLE	72%	86%	71%	87% *
6081	CENTENNIAL MIDDLE	35%	32%	40%	40%
6091	CITRUS GROVE MIDDLE	32%	23%	37%	28%
6111	CUTLER RIDGE MIDDLE	50%	50%	47%	52%
6121	RUBEN DARIO MIDDLE	50%	49%	52%	49%
6131	HOWARD A. DOOLIN MIDDLE	46%	48%	54%	52%
6141	CHARLES R. DREW MIDDLE	25%	19%	32%	26%
6151	DORAL MIDDLE	60%	63%	63%	60%
6161	LAWTON CHILES MIDDLE	51%	56%	54%	57%
6171	HENRY H. FILER MIDDLE	54%	46%	48%	35%
6211	GLADES MIDDLE	52%	58%	53%	58%
6221	HAMMOCKS MIDDLE	52%	60%	52%	62%
6231	HIALEAH MIDDLE	37%	36%	45%	41%
6241	HIGHLAND OAKS MIDDLE	53%	61%	53%	60%
6251	HOMESTEAD MIDDLE	36%	31%	43%	37%
6281	THOMAS JEFFERSON MIDDLE	36%	27%	38%	33%
6301	JOHN F. KENNEDY MIDDLE	44%	43%	44%	45%
6331	KINLOCH PARK MIDDLE	46%	42%	47%	41%
6351	LAKE STEVENS MIDDLE	32%	32%	40%	38%
6361	JOSE DE DIEGO MIDDLE	26%	19%	30%	21%
6391	MADISON MIDDLE	31%	19%	32%	25%
6411	HORACE MANN MIDDLE	33%	28%	39%	36%
6421	JOSE MARTI MIDDLE	46%	41%	44%	39%
6431	MAYS MIDDLE COMMUNITY	35%	31%	40%	38%
6441	HOWARD D. MCMILLAN MIDDLE	51%	57%	53%	60%
6481	MIAMI EDISON MIDDLE	32%	19%	41%	27% *
6501	MIAMI LAKES MIDDLE	50%	53%	53%	52%
6521	MIAMI SPRINGS MIDDLE	40%	33%	46%	38%
6541	NAUTILUS MIDDLE	40%	46%	44%	43%
6571	NORLAND MIDDLE	42%	43%	44%	47%
6591	NORTH DADE MIDDLE	40%	36%	39%	41%
6631	NORTH MIAMI MIDDLE	41%	31%	35%	32%
6681	PALM SPRINGS MIDDLE	46%	46%	47%	43%
6701	PALMETTO MIDDLE	64%	76%	60%	76%
6721	PARKWAY MIDDLE	34%	31%	38%	39%
6741	PONCE DE LEON MIDDLE	46%	43%	46%	45%
6761	REDLAND MIDDLE	35%	32%	41%	40%
6781	RICHMOND HEIGHTS MIDDLE	41%	39%	42%	44%
6801	RIVIERA MIDDLE	45%	48%	44%	48%
6821	ROCKWAY MIDDLE	56%	60%	56%	58%
6841	SHENANDOAH MIDDLE	34%	31%	47%	39%
6861	SOUTHWOOD MIDDLE	58%	69%	56%	70%
6881	SOUTH MIAMI MIDDLE COMM.	54%	64%	50%	61%

School #	School Name	Math Gain	Math Status	Reading Gain	Reading Status
6901	W. R. THOMAS MIDDLE	44%	49%	48%	51%
6961	WEST MIAMI MIDDLE	46%	45%	55%	48%
6981	WESTVIEW MIDDLE	34%	21%	34%	26%
7011	AMERICAN SENIOR	48%	47%	51%	48%
7020	DORAL ACADEMY HIGH SCHOOL	54%	62%	65%	64%
7051	G. HOLMES BRADDOCK SENIOR	46%	52%	51%	55%
7071	CORAL GABLES SENIOR	46%	49%	48%	50%
7081	DESIGN & ARCHITECTURE SR.	72%	87%	70%	85% *
7101	CORAL REEF SENIOR	64%	82%	63%	82% *
7111	HIALEAH SENIOR	46%	44%	46%	42%
7131	HIALEAH-MIAMI LAKES SENIOR	40%	38%	43%	41%
7141	DR. MICHAEL M. KROP SENIOR	59%	69%	57%	67%
7151	HOMESTEAD SENIOR	39%	35%	44%	42%
7161	MAST ACADEMY SENIOR	71%	91%	71%	92% *
7201	MIAMI BEACH SENIOR	41%	43%	46%	42%
7231	MIAMI CAROL CITY SENIOR	36%	26%	38%	33%
7251	MIAMI CENTRAL SENIOR	35%	20%	32%	23%
7254	MIAMI D. MACARTHUR NORTH SR	14%	7%	32%	18% *
7271	MIAMI CORAL PARK SENIOR	51%	55%	54%	53%
7301	MIAMI EDISON SENIOR	24%	11%	27%	15%
7341	MIAMI JACKSON SENIOR	25%	16%	32%	22%
7361	MIAMI KILLIAN SENIOR	52%	59%	52%	61%
7381	MIAMI NORLAND SENIOR	32%	27%	38%	36%
7391	MIAMI LAKES EDUCATIONAL CNT	53%	55%	52%	57%
7411	MIAMI NORTHWESTERN SENIOR	31%	22%	38%	33%
7431	MIAMI PALMETTO SENIOR	61%	75%	56%	72% *
7461	MIAMI SENIOR	43%	36%	48%	38%
7511	MIAMI SPRINGS SENIOR	39%	34%	45%	38%
7531	MIAMI SUNSET SENIOR	51%	56%	50%	57%
7541	NORTH MIAMI BEACH SENIOR	47%	47%	49%	49%
7591	NORTH MIAMI SENIOR	49%	33%	46%	35%
7601	WILLIAM TURNER TECH ART SR	49%	53%	53%	61%
7631	MIAMI D. MACARTHUR SOUTH SR	20%	17%	29%	23%
7701	SOUTH DADE SENIOR	33%	33%	42%	42%
7721	SOUTH MIAMI SENIOR	48%	50%	51%	50%
7731	MIAMI SOUTHRIDGE SENIOR	41%	42%	47%	48%
7741	SOUTHWEST MIAMI SENIOR	52%	53%	55%	55%
7751	BARBARA GOLEMAN SENIOR	45%	47%	47%	47%
7781	FELIX VARELA SENIOR	54%	60%	54%	59%
7791	BOOKER T. WASHINGTON SR.	29%	16%	30%	18%
7901	NEW WORLD SCHOOL ARTS SR.	61%	82%	64%	86% *
8017	ED. ALTERNATIVE OUTREACH	22%	11%	21%	14%
8019	ACADEMY FOR COMMUNITY ED.	54%	54%	53%	53%
8101	JAN MANN OPPORTUNITY ED.	10%	5%	20%	12%
8119	THE 500 ROLE MODELS ACADEMY	9%	8%	25%	16%
8121	C.O.P.E. NORTH ALT. ED. C.	18%	16%	38%	32% *
8131	DOROTHY M. WALLACE	23%	18%	34%	31%
8151	ROBERT RENICK ED. CENTER	5%	1%	18%	5%
8161	CORPORATE ACADEMY NORTH	12%	16%	24%	24%
8171	SCHOOL FOR APPLIED TECH.	47%	38%	51%	50%
8181	RUTH OWENS KRUSE ED. CENTER	24%	8%	27%	15% *
8201	CORPORATE ACADEMY SOUTH	39%	36%	47%	43%
8911	ROBERT MORGAN TECH. ARTS SR	32%	26%	36%	33%
9731	INSTRUCTIONAL C. SYSTEMWIDE	12%	5%	23%	14%
9732	MERRICK EDUCATIONAL CENTER	51%	29%	37%	35% *