Miami-Dade County Public Schools
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RESEARCH BRIEF

Research Services

Vol. 0601
August 2006

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Predicting 3rd Grade and 10th Grade FCAT Success for 2006-07

Results in a Nutshell

Predicting 3rd Grade Reading FCAT Performance

For Current 3rd Graders:
If 2nd Grade NRT percentile is greater than 20
predict 3rd Grade SSS Levels 2-5 Success

Predicting 10th Grade Reading FCAT Performance

For Current 10th Graders:
If 9th Grade SSS Score is greater than 304
predict 10th Grade SSS >300 Success

For Current 9th Graders:
If 8th Grade SSS Score is greater than 295
predict 10th Grade SSS >300 Success

Predicting 10th Grade Mathematics FCAT Performance

For Current 10th Graders:
If 9th Grade SSS Score is greater than 267
predict 10th Grade SSS >300 Success

For Current 9th Graders:
If 8th Grade SSS Score is greater than 274
predict 10th Grade SSS >300 Success

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Introduction

For the past few years the Florida School Code has set FCAT performance requirements for promotion of 3rd graders and graduation for 10th graders. Grade 3 students who do not score at level 2 or higher on the FCAT SSS Reading must be retained unless exempted for special circumstances. Grade 10 students must earn a passing score of 300 or higher in reading and mathematics to qualify for a standard diploma. Many of our students are at risk of not meeting these requirements and having their academic progress interrupted. Clearly, any help in predicting which students may be in jeopardy of not passing the FCAT would help in providing targeted academic remediation to the students most in need.

Previous Predictions

Research Services began providing formulas for the prediction of FCAT performance a couple of years ago. Using FCAT scores from the previous year, teachers, counselors, and other interested parties early in the school year could compute a specific predicted score on the upcoming FCAT tests months in advance. Listings of students at risk of not passing the FCAT in the critical 3rd and 10th grades were provided to all schools by Assessment and Data Analysis. The formulas were successful in predicting the ultimate pass/fail status for 3rd and 10th grade students in approximately 85 percent of the cases.

The service of providing predictions has been very well received by schools sites and has proved useful in identifying and prioritizing those students needing additional attention. This research brief is a continuation of that annual service.

The Prediction Model

The formulas and cutoff scores provided in this study are derived from the observed historical relationships between test scores at the appropriate grade levels. Current 3rd graders will have their upcoming 3rd grade FCAT test predicted from last year's 2nd grade Stanford Achievement Test NRT scores. Current 10th graders will have their upcoming 10th grade FCAT tests predicted from last year's 9th grade FCAT test scores. In addition, a two-year prediction is provided. Specifically, current 9th graders will have their following year eventual 10th grade FCAT tests predicted from last year's 8th grade FCAT test scores. This two-year anticipation of the 10th grade test allows even greater possibilities for remediation with little loss of predictive precision.

The Prediction Formulas

Linear regression analyses resulted in the following prediction formulas.

For current 3rd graders:

Predict the 2006-07 3rd grade reading SSS from: 224.25 + (1.668 * 2nd grade 2005-06 NRT percentile)

For current 10th graders:

Predict the 2006-07 10th grade reading SSS from: 50.627 + (.819 * 9th grade 2005-06 reading SSS)

Predict the 2006-07 10th grade mathematics SSS from: 132.996 + (.625 * 9th grade 2005-06 mathematics SSS)

For current 9th graders:

Predict the 2007-08 10th grade reading SSS from: 91.17 + (.706 * 8th grade 2005-06 reading SSS)

Predict the 2007-08 10th grade mathematics SSS from: 129.48 + (.621 * 8th grade 2005-06 mathematics SSS)

As a general rule of thumb, approximately 50 percent of the time these equations should yield estimates that are within 20 scale points of the actual results.

Example: a 10th grade student had a score of 240 in Reading last year as a 9th grader.
What would be his/her predicted score in 10th grade?
*50.627 + (.819 * 240) = 247.187*
50.627 + 196.560 = 247.187
Predicted score in 10th grade is 247

This information could then be used by the classroom teacher to target students for appropriate remediation.

Cutoff Scores
Using the above equations, we can compute the minimum values from one year that would predict FCAT success the following year. Predictions of this type should accurately predict FCAT pass/failure approximately 85 percent of the time.

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For Current 10th Graders:
If 9th Grade SSS Score is greater than 267, predict 10th Grade SSS >300 Success

Predicting 2007-08 10th Grade Mathematics FCAT Performance

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Cautions
There are many reasons why these predictions may not be proven correct. First, they are built on previous years' relationships and the associations for this year will not be exactly the same. The unreliability in the scores, themselves, puts limits on predictive success. Furthermore, it is every student's ambition and every teacher's hope that the student will perform better than expected in any given year. Any extraordinary effort or especially effective program would, hopefully, result in the student exceeding these predictions. However, in the absence of other information and under pressing time constraints, these predictions should be useful.