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RESEARCH BRIEF

Research Services

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

Results in a Nutshell

Predicting 3rd Grade Reading FCAT Performance

For Current 3rd Graders:
If 2nd Grade NRT percentile is greater than 34
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 306
predict 10th Grade SSS >300 Passing Score

For Current 9th Graders:
If 8th Grade SSS Score is greater than 307
predict 10th Grade SSS >300 Passing Score

Predicting 10th Grade Mathematics FCAT Performance

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

For Current 9th Graders:
If 8th Grade SSS Score is greater than 279
predict 10th Grade SSS >300 Passing Score

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Introduction

Recent revisions of the Florida School Code by the Florida Legislature have set FCAT performance requirements for promotion of 3rd graders and graduation for 10 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

Last year the Department of Research Services began providing formulas for the prediction of FCAT performance. 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 in mid-August 2005. 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 was very well received by schools sites last year and proved useful in identifying and prioritizing those students needing additional attention. This research brief is a continuation and expansion of that 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, this year 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

Simple linear regression analyses resulted in the following prediction formulas.

<u>For current 3rd graders:</u>

Predicted 3rd grade reading SSS = 196 + (1.813 x 2nd grade NRT percentile)

<u>For current 10th graders:</u>

Predicted 10th grade reading SSS = 51.15 + (.812 x 9th grade reading SSS)

Predicted 10th grade mathematics SSS = 131.19 + (.631 x 9th grade mathematics SSS)

<u>For current 9th graders:</u>

Predicted 10th grade reading SSS = 60.68 + (.778 x 8th grade reading SSS)

Predicted 10th grade mathematics SSS = 114.89 + (.663 x 8th grade 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?
51.15 + (.812 x 240) = 246.03
Predicted score in 10th grade is 246

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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Cautions

There are many reasons why these prediction formulas and cutoff scores may not be proven correct. First, they are built on previous years' relationships among the variables and the associations 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 could likely result in the student exceeding these predictions. However, in the absence of other information and under increasing pressure on classroom teachers to help all children learn to high levels of achievement, these prediction formulas should be useful.