



Because You Can't Wait Until Spring:  
Using the SRI to Improve  
Reading Performance

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**Scholastic Reading Inventory™ (SRI)** is an objective assessment of a student's reading comprehension level. The computer adaptive assessment can be administered to students in Grades K—12 and is based on The Lexile Framework® for Reading. The test format supports quick administration in an un-timed, low-pressure environment. SRI is proven to be an effective assessment to:

- (1) Identify struggling readers.
- (2) Plan for instruction.
- (3) Gauge the effectiveness of a curriculum.
- (4) Demonstrate accountability.
- (5) Set growth goals.
- (6) Forecast state test outcomes.

SRI focuses on the skills readers use when studying written materials sampled from various content areas. These skills include referring to details in the passage, drawing conclusions, and making comparisons and generalizations. SRI does not require prior knowledge of ideas outside of the passage, vocabulary taken out of context, or formal logic. SRI is built from authentic passages that are typical of the materials students read both in and out of school.

- The “embedded completion” item format used with SRI has been shown to measure the same core reading competency that is measured by norm-referenced, criterion-referenced, and individually administered reading tests.
- The calibration equation used to calibrate SRI test items is the same equation that is used to measure books/texts. Thus, readers and texts are placed on the same scale. A multi-stage review process was used to ensure conformance with the text sampling and item writing specifications.
- SRI uses a Bayesian scoring algorithm, which provides a paradigm for combining prior information with current data, to come up with an estimate of current reading level. This methodology connects each test administration to every other administration and thus produces a highly precise measurement.

SRI is designed to measure a reading ability with texts of increasing difficulty. Once this measure is obtained, SRI can be used to set growth goals, monitor progress, inform instruction, and predict state test outcomes. SRI helps to ensure that every student becomes a competent and motivated reader by individualizing their learning experience based on their specific abilities.

## INTRODUCTION

While teachers typically have a good understanding of what students are expected to know and be able to do in order to demonstrate basic grade-level reading proficiency and to prepare their students for high-stakes achievement tests in reading, they may not always have timely or accurate information to help individual students develop their reading skills. Moreover, because teachers may differ in their approach to reading instruction—both basic reading instruction and remedial interventions—they are often in need of a measure that provides precise, useful information about reading ability that is aligned with end-of-year measures and is more or less neutral with respect to their chosen approach to reading instruction.

This paper examines the relationship between such a measure of student reading level—the Scholastic Reading Inventory (SRI), and the measure of Florida reading standards, the Florida Comprehensive Assessment Test, Sunshine State Standards (FCAT-SSS) Reading. Specifically this paper describes a study conducted to determine if Lexile scores from the SRI could predict FCAT-SSS reading scores at varying levels of proficiency. The study was done in order to provide grounded, statistically sound information that will enable Florida teachers to identify early in the fall semester students in danger of failing to achieve proficiency on the FCAT-SSS Reading. As a result of the study, a model of fall-to-spring growth was developed that can be used to inform instructional practice over the school year. This model can be thought of as a tool for calibrating student reading level with the difficulty of classroom materials in order to tailor effective interventions based on specific growth “targets” at the individual student level.

Indeed, the results of the study point to a classroom assessment that is statistically “aligned” to high-stakes state test results and that can be used to identify students in need of assistance, effectively guiding instructional interventions early in the school year. By providing teachers with an effective *classroom* assessment tool that produces a metric that describes both the complexity of text and student reading comprehension, and that is known to be related to high stakes state test results, teachers can then:

1. Align instructional materials to state standards and scaffold student comprehension instruction.
2. Establish realistic, informed student achievement growth goals based on students’ initial reading comprehension level.
3. Monitor an instructional plan to help students at all levels demonstrate proficiency in meeting reading standards.

In other words, teachers using the SRI will be able to obtain the data they need throughout the year to monitor student progress, set goals according to reading level, and adjust instruction appropriately.

## METHOD

### Participants

In SY2001–2002, SRI and FCAT-SSS Reading data were collected from all students attending Grades 3–10 in schools in the School District of Palm Beach County (SDPBC). SRI data were collected from second-grade students in the spring of 2001. Table 1 shows the demographic characteristics by grade level of the students included in the study.

### Brief Description of the Measures: FCAT-SSS Reading and SRI

#### FCAT-SSS Reading

The FCAT-SSS Reading is a criterion-referenced assessment intended to measure selected benchmarks from the Sunshine State Standards (SSS). Test items for Grades 3–10 are multiple choice, while additional, short, and extended response items are included on the tests administered at Grades 4, 8, and 10. Two types of scale scores are reported on FCAT-SSS Reading: (1) scale scores for each grade level (100–500 points), and (2) developmental scale scores (DSS) that span all grade levels (0–3,000). Internal consistency reliability scores produced by Cronbach’s Alpha on the SY2001–02 reading test range from .87 to .91 (Assessment, 2004).

**Table 1**

| Demographic Characteristics of Students Enrolled in the School District of Palm Beach County in the Fall by School Year and Grade Level |             |                    |                  |          |         |                    |         |         |
|---|-------------|--------------------|------------------|----------|---------|--------------------|---------|---------|
|   |             | Number of Students | African American | Hispanic | White   | Free/Reduced Lunch | ESOL    | ESE     |
| School Year   | Grade Level | Number             | Percent          | Percent  | Percent | Percent            | Percent | Percent |
| <b>2000–01</b>  | <b>2</b>    | 7,515              | 21.5             | 16.9     | 53.8    | 40.4               | 13.4    | 3.3     |
| <b>2001–02</b>  | <b>3</b>    | 8,222              | 2.18             | 17.6     | 50.8    | 43.3               | 11.0    | 4.3     |
|   | <b>4</b>    | 9,774              | 28.1             | 17.5     | 48.1    | 47.9               | 8.9     | 7.2     |
|   | <b>5</b>    | 10,236             | 27.4             | 17.9     | 49.9    | 46.1               | 6.9     | 10.3    |
|   | <b>6</b>    | 10,717             | 27.0             | 17.9     | 50.3    | 43.3               | 3.6     | 9.5     |
|   | <b>7</b>    | 10,465             | 27.0             | 17.4     | 51.0    | 39.5               | 3.8     | 10.16   |
|   | <b>8</b>    | 9,935              | 26.3             | 16.4     | 52.7    | 34.6               | 4.8     | 9.72    |
|   | <b>9</b>    | 11,774             | 29.4             | 16.6     | 50.1    | 22.9               | 6.6     | 9.5     |
|   | <b>10</b>   | 6,876              | 20.9             | 13.9     | 59.8    | 15.0               | 5.4     | 5.6     |

**Table 2**

| Correlations Between SY2001–02 Fall and Spring SRI Scores by Grade Level |                    |                          |
|--|--------------------|--------------------------|
| Grade  | Number of Students | Correlation <sup>1</sup> |
| 3  | 10,363             | .81                      |
| 4  | 10,355             | .81                      |
| 5  | 10,400             | .82                      |
| 6  | 10,157             | .83                      |
| 7  | 9,668              | .84                      |
| 8  | 9,197              | .84                      |
| 9  | 10,229             | .85                      |
| 10   | 6,058              | .81                      |

Criterion-related validity of the SY2001–02 FCAT-SSS was established by correlating the FCAT-SSS Reading scores with the FCAT-NRT (Stanford 9) scores. The correlations between these two tests range from .80 to .84 (Assessment, 2004). Students in Grades 3–10, including LEP and exceptional education students (EES) took the test in March of 2002. LEP and EES students who had current Individual Educational Plans (IEP) received accommodations to complete the FCAT. The FCAT-SSS Reading has five achievement levels in total: levels 1-2 are below proficient, level 3 is the minimum level for a student to be classified as having attained proficiency at his grade level.

**SRI**

The SRI is a computer adaptive test that measures reading comprehension. Reading comprehension is operationally defined on the SRI as: “paraphrasing information in the passage, drawing logical conclusions based on information in the passage, making an inference, identifying a supporting detail, or making a generalization based on information in the passage” (Scholastic Reading, 2001, 5). Test items are based on authentic passages taken from textbooks, literature, and periodicals and consist, for each passage, of multiple-choice items with a fill-in-the-blank format. Because the several alternatives for each item could correctly fit in the blank when the item is considered separate from the passage, students must understand the material they have read in order to respond correctly.

<sup>1</sup> Correlations are significant at  $p < .0001$

### Sample Test Item from SRI

“I leaned back for a moment and let my eyes wander down below. We were way out over the ocean. I looked at my watch—a little more than thirty minutes from Orlando so far. The sea looked choppy, even with the bright, sunny weather. An occasional cloud cast its shadow down on the stony-looking water surface. The wavering outline of the plane appeared and disappeared.”

I had a good \_\_\_\_\_.

- nap
- view
- idea
- lunch

SRI results are reported on a Lexile® scale, which is a developmental scale interpretable across grade levels. The Lexile score that a student receives indicates the most difficult text a student can comprehend with 75% or greater accuracy. In addition to being a measure of reading level, the Lexile scale is also used to characterize text. When applied to text, the Lexile scale serves as an index of the level of complexity of written materials, where variations in complexity result from such things as the frequency of the words that occur in the text as well as the length of the sentences (Lennon & Burdick, 2004). As a result of this “dual purpose of Lexiles,” the two related scores—Lexiles as a measure of reading level and Lexiles as an index of text difficulty—can be easily used to form a natural bridge between reader and text.

Table 2 (see page 3) shows that SRI test-retest correlations for School District of Palm Beach City (SDPBC) test takers in Grades 3–10 ranged from .81 to .85 for SY2001–02. The SRI was first administered to these students in fall 2001 and then in spring 2002. The SRI was also given to second-grade students first in spring 2001 and to the same group of students (enrolled then in third grade) in fall 2001. The correlation for this administration was .78 (n=9,343).

Criterion-related validity of the SY2001–02 SRI scores was established by correlating both fall and spring SRI scores to the spring 2002 FCAT-SSS Reading scores. The fall-to-spring correlations for Grades 3–10 range between .71–.76 while the spring-to-spring correlations range from .75–.82. The correlations by grade level are presented in Table 3 (see page 5). The correlation between the second-grade 2001 spring administration of SRI and the spring 2002 third-grade FCAT-SSS Reading was .72 (n=9,687).

**Table 3**

| Correlation of SY2001–02 Fall and Spring SRI Scores with Spring 2002 FCAT-SSS Reading Scale Scores by Grade <sup>2</sup> |                 |          |                   |          |
|--|-----------------|----------|-------------------|----------|
| Grade  | Fall SRI Lexile |          | Spring SRI Lexile |          |
| 3  | .75             | n=10,587 | .81               | n=11,086 |
| 4  | .76             | n=10,675 | .82               | n=11,210 |
| 5  | .73             | n=10,659 | .79               | n=11,270 |
| 6  | .76             | n=11,043 | .81               | n=10,807 |
| 7  | .73             | n=10,751 | .77               | n=10,466 |
| 8  | .75             | n=10,139 | .78               | n=9,856  |
| 9  | .73             | n=11,948 | .77               | n=11,203 |
| 10   | .71             | n=6,884  | .75               | n=7,056  |

### Test Administration Procedures

Results from the SRI and the FCAT-SSS Reading were collected in SY2001–02 through the SDPBC districtwide assessment program. The SRI was administered two times: Students in Grades 3–10 completed the fall administration of the SRI between September 4 and October 12, 2001. Students in Grades 2–10 completed the spring administration of the SRI May 1–24, 2002. Students in Grades 3–10 completed the FCAT-SSS Reading March 5–12, 2002.

School testing coordinators followed the Florida Department of Education test administration guidelines when administering the FCAT-SSS Reading. The SRI was administered at each school site during the above testing administration windows set by the SDPBC. Elementary students completed the SRI with their homeroom teacher while secondary students tested in their reading or language arts class. All students were tested in the school computer lab. Although the SRI was not timed, all students were scheduled to complete the test during a one-hour class period.

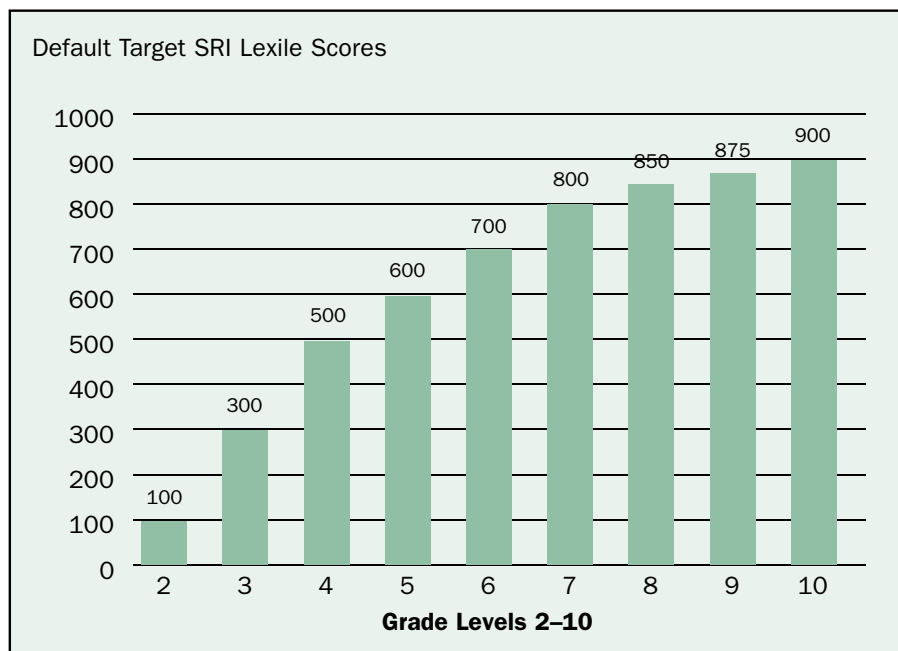
Prior to the fall SRI testing session, each school populated the SRI database, located on the school file server, with a data file supplied by the district. The data file contained the names, student identification numbers, student passwords, and FCAT-NRT Reading (Stanford 9) Lexile scores collected from the prior school year, which were generated by and purchased from Harcourt Brace.

<sup>2</sup> Correlations are significant at  $p < .0001$

A default Lexile, established by specialists in the Curriculum and Instruction Department, was used to target the SRI test for students who did not participate in SRI or FCAT-NRT testing the prior school year. Graph 4 shows the default target Lexile for each grade level. This score is used for initial placement of the test taker into the actual administration of the SRI, enabling the program to select initial test passages that are of appropriate level of difficulty based on an estimate of the student's reading level.

At the close of each testing window, the SRI data was electronically shipped to the district and posted to student records stored on the mainframe. Prior to the spring testing session, each school electronically updated the school SRI database with information for students new to the school.

**Graph 4**



### **Statistical Relationship between the SRI and the FCAT-SSS Reading**

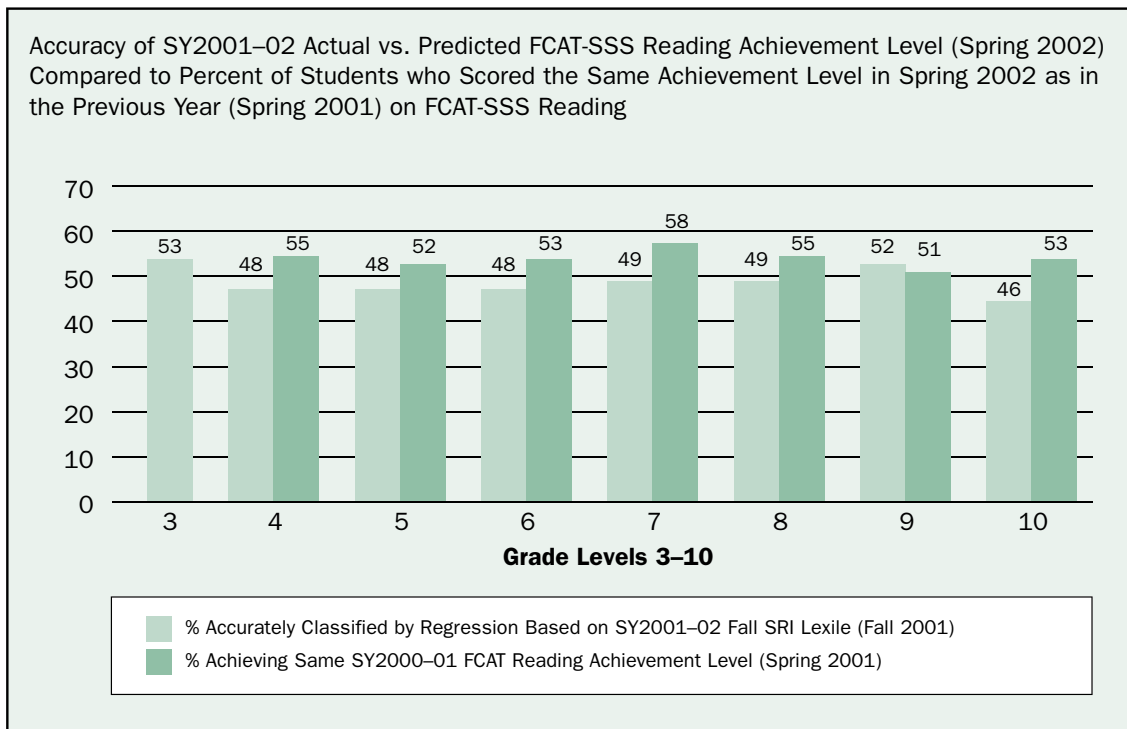
Standard statistical regression techniques were used to examine the predictive relationship between the SRI and the FCAT-SSS. Results of this analysis were used to establish the SRI scores equivalent to the FCAT-SSS scale scores that define the cut-points that demarcate achievement levels (1 through 5) for Grades 3–10. Regression was chosen because, unlike other methods that were applied to the data, the regression equation was most successful at accurately predicting



FCAT-SSS scores from fall SRI scores for students in FCAT-SSS Reading achievement level 3. This is the FCAT achievement level that the state defines as proficient, and is taken as defining grade-level performance within the SDPBC. Graph 5 shows a comparison of the accuracy of predicting spring FCAT achievement levels from 1) fall SRI scores from the same academic year as the predicted results, and 2) previous years FCAT achievement level. Accuracy was established by comparing the achievement level “predicted” from the fall SRI score to the actual achievement level. The percent of fall SRI scores accurately predicted was compared to the percent of FCAT scores that maintained the same FCAT achievement level as the year prior. As the table shows, the fall SRI scores were nearly as accurate predictors as were FCAT-SSS scores from the previous spring.

To align second-grade student reading performance to the FCAT reading achievement levels, third-grade reading scale scores on the FCAT-SSS in SY2001–02 were regressed on SY2000–01 spring SRI Lexile scores from all second-grade students. SY2001–02 reading scale scores on the FCAT-SSS for all students in Grades 3–10 were regressed on their fall and their spring SRI scores.

**Graph 5**



## A Brief Digression on Regression

There are two important reasons for establishing the predictive relationship between the SRI and the FCAT-SSS. By doing so, we can establish the value of the SRI as a tool to: 1) identify early in the fall of the academic year those students requiring help to develop their reading skills, and 2) measure progress in reading throughout the year. The easiest way to establish this predictive relationship is to use a simple yet powerful statistical technique known as linear regression. In simplest terms, this technique reveals the linear, mathematical relationship, between the values of two variables. In our case, regression can be used to predict FCAT-SSS Reading scores for any student using their SRI scores.

While we won't go into the actual details of this statistical technique, it is important to know the two key values that regression analyses typically yield. These two values are the correlation between the two variables and the slope of the relationship between these two variables. The correlation tells us how strong the relationship is and whether it is positive or negative. A strong directional correlation (in this case, positive) between the fall SRI scores and the FCAT-SSS Reading scores supports our confidence to predict (with some degree of accuracy) a certain score on the FCAT. The slope gives information about how much change on one variable (here the predictor, or SRI) is necessary to yield a unit change on the other (here, the FCAT-SSS Reading). One can see how both of these pieces of information are important. In the next section, we will detail both the correlational strength and the slope of the relationship between SRI scores and FCAT-SSS Reading scores for students in Grades 3 through 8. We will show how these two pieces of information both can be used to aid identification, instructional planning, and progress monitoring throughout the school year.

## Regression Results

Table 2 (see page 3) shows the correlation between the SY2001–02 fall and spring SRI scores. Predictably this relationship is positive and strong and acts as a measure of the reliability of the SRI.

The correlations between fall and spring SRI scores and the spring FCAT-SSS Reading scores are presented in Table 3 (see page 5). As expected, the correlation is slightly higher between the spring SRI scores and the FCAT-SSS scores than that between the fall SRI scores and the FCAT-SSS results. The average of the correlations between the scores is .79 in the spring, while it is slightly lower in the fall, at .74. Also as expected, these correlations are lower than the correlation between the fall and spring SRI scores, the average of which is .83. It is evident, however, at least for these samples and grades, that the average correlations between the spring SRI and the FCAT-SSS, and the fall and spring SRI scores, are nearly equivalent.

Each of these pieces of evidence taken together provides strong evidence that the SRI can be effectively used to identify students in the fall for intervention. **This follows from the simple fact, now established, that low or high scores on the SRI in the fall are related with low or high scores on the high stakes FCAT-SSS.**

**The next question to ask is:** What is the incremental increase on the FCAT-SSS Reading that one gains for each unit increase on the SRI? The reason for asking this question is that the answer will indicate, when compared to standard fall to spring growth on the SRI, the amount that students will have to actually improve (as measured by the SRI) in order to achieve successful (i.e., level 3 proficiency) scores on the FCAT-SSS. The answer is provided in Table 6, which includes results from the regression analysis described above. Two specific pieces of information are included: 1) the rate of change (or slope) between the predictor variable and 2) the predicted variable, and the intercept, which is the value of the predicted variable when the value of the predictor is zero.

The concept of the slope can be more easily understood if one remembers that the simple algebraic formula for a line can be expressed as  $y = mx + b$ , where  $m$  is the slope,  $x$  is the independent variable,  $b$  is the value of  $y$  when  $x$  is equal to zero, and  $y$  is the dependent variable. In our case,  $y$  is the predicted variable and  $x$  is the predictor. The slope yields an index of the expected change in the predicted variable for each unit change in the predictor variable. For example, for Grade 3 the increase is about .15 units on the FCAT developmental scale for each unit increase on the SRI.

**Table 6**

| Regression Coefficients for Grades 3–8 for FCAT-SSS Reading and SRI |                         |       |           |         |        |
|---|-------------------------|-------|-----------|---------|--------|
| Y<br>Predicted Variable   | X<br>Predictor Variable | Grade | Intercept | Slope   | N      |
| FCAT Reading  | SRI Lexile              | 3     | 239.60257 | 0.15750 | 8,041  |
| FCAT Reading  | SRI Lexile              | 4     | 219.60261 | 0.15265 | 9,564  |
| FCAT Reading  | SRI Lexile              | 5     | 175.18560 | 0.15923 | 9,974  |
| FCAT Reading  | SRI Lexile              | 6     | 170.05979 | 0.16010 | 10,584 |
| FCAT Reading  | SRI Lexile              | 7     | 167.23780 | 0.15162 | 10,215 |
| FCAT Reading  | SRI Lexile              | 8     | 161.30156 | 0.14380 | 9,718  |
| FCAT Reading  | SRI Lexile              | 9     | 148.43805 | 0.14022 | 10,639 |
| FCAT Reading  | SRI Lexile              | 10    | 178.60881 | 0.11825 | 6,312  |

## Expected Growth

As noted above, fall or spring SRI scores can be used to predict FCAT-SSS Reading scores. These predicted FCAT scores can be used to first identify the values that correspond to the FCAT-SSS Reading cut scores that define the several achievement levels and then, in a manner working backwards, “look up” the fall and spring SRI scores that are equivalent to those achievement level cut-points. Using these SRI scores, we can develop a model of expected, or necessary growth.

In other words, if we assume that the fall SRI score that corresponds to the FCAT-SSS Reading level 3 cut score is the starting point, and the correlative spring SRI score defines the end point, that is the point where a student must be to maximize the likelihood that they will be in (or remain in) achievement level 3 at the time of spring FCAT testing, then we can use these two points to define a trajectory for fall to spring growth, as explained below.

Table 7 shows the SRI values for fall and spring that correspond to the several FCAT-SSS Reading achievement level cut-points. These correspondences were derived in several steps: first, for each grade, the grade-level FCAT scores (ranging from 100–500) were regressed on fall and spring SRI scores. This produced the regression coefficients shown in Table 6 (see page 9). Using these equations, SRI scores could be used to predict FCAT scores on the grade-level scale. Based on these predicted scores, the SRI scores that corresponded to the several cut-points on each grade-level scale were identified and, using conversion equations supplied by the Florida Department of Education, converted to the full developmental scale. These are the values in the column labeled “Florida Reading DSS.” Converting the more limited, grade-level scales to the full developmental scale enables more appropriate comparisons across grades and years of administration of the FCAT-SSS Reading.

The central virtue of the information in Table 7 is that we can identify, using fall SRI scores for students at any “predicted” FCAT achievement level, how much growth a student will need to show on the SRI from fall to spring to 1) stay at the current predicted level, or 2) increase levels, for example, to go from a predicted achievement level 2 to achievement level 3.

Table 8 (see page 12) shows the actual increases from fall to spring on the SRI that are needed for students to maintain their current predicted spring FCAT achievement level at the same level. Also shown are the spring-to-spring SRI increases that would be necessary to stay at the same predicted FCAT achievement level from one grade to the next one, say Grade 4 to 5, or Grade 5 to 6. While not shown in Table 8, the data in Table 7 can also be used to calculate the amount of growth on the SRI that is required for students to increase one or more levels, say from level 2 to level 3, or level 1 to level 2.

**Table 7**

| Fall and Spring SRI Scores Equivalent to Spring FCAT-SSS Reading Achievement Level Cut Points |                                    |                  |                 |                   |
|---|------------------------------------|------------------|-----------------|-------------------|
| Grade   | FCAT-SSS Reading Achievement Level | FCAT Reading DSS | SRI Fall Lexile | SRI Spring Lexile |
| <b>2</b><br><b>At Grade Level</b>   | 5                                  | n/a              | n/a             | >=955             |
|   | 4                                  | n/a              | n/a             | 540               |
|   | 3                                  | n/a              | n/a             | 220               |
|   | 2                                  | n/a              | n/a             | 53                |
|   | 1                                  | n/a              | n/a             | <=52              |
| <b>3</b><br><b>At Grade Level</b>   | 5                                  | >=1871           | >=981           | >=1048            |
|   | 4                                  | 1494             | 587             | 714               |
|   | 3                                  | 1203             | 282             | 456               |
|   | 2                                  | 1051             | 124             | 322               |
|   | 1                                  | 86               | <=123           | <=321             |
| <b>4</b><br><b>At Grade Level</b>   | 5                                  | >=1970           | >=1090          | >=1146            |
|   | 4                                  | 1695             | 782             | 875               |
|   | 3                                  | 1461             | 520             | 643               |
|   | 2                                  | 1320             | 363             | 504               |
|   | 1                                  | 295              | <=362           | <=503             |
| <b>5</b><br><b>At Grade Level</b>   | 5                                  | >=2064           | >=1315          | >=1347            |
|   | 4                                  | 1767             | 979             | 1040              |
|   | 3                                  | 1515             | 697             | 779               |
|   | 2                                  | 1347             | 508             | 605               |
|   | 1                                  | 474              | <=507           | <=604             |
| <b>6</b><br><b>At Grade Level</b>   | 5                                  | >=2131           | >=1356          | >=1389            |
|   | 4                                  | 1865             | 1056            | 1097              |
|   | 3                                  | 1626             | 787             | 836               |
|   | 2                                  | 1454             | 594             | 648               |
|   | 1                                  | 539              | <=593           | <=647             |
| <b>7</b><br><b>At Grade Level</b>   | 5                                  | >=2185           | >=1463          | >=1508            |
|   | 4                                  | 1949             | 1166            | 1206              |
|   | 3                                  | 1719             | 876             | 912               |
|   | 2                                  | 1546             | 659             | 691               |
|   | 1                                  | 671              | <=658           | <=690             |
| <b>8</b><br><b>At Grade Level</b>   | 5                                  | >=2286           | >=1623          | >=1663            |
|   | 4                                  | 2076             | 1313            | 1355              |
|   | 3                                  | 1886             | 1035            | 1074              |
|   | 2                                  | 1700             | 763             | 800               |
|   | 1                                  | 886              | <=762           | <=799             |
| <b>9</b><br><b>At Grade Level</b>   | 5                                  | >=2302           | >=1666          | >=1708            |
|   | 4                                  | 2150             | 1467            | 1500              |
|   | 3                                  | 1977             | 1238            | 1264              |
|   | 2                                  | 1776             | 975             | 990               |
|   | 1                                  | 772              | <=974           | <=989             |
| <b>10</b><br><b>At Grade Level</b>  | 5                                  | >=2316           | >=1637          | >=1690            |
|   | 4                                  | 2224             | 1493            | 1543              |
|   | 3                                  | 2072             | 1256            | 1302              |
|   | 2                                  | 1856             | 918             | 958               |
|   | 1                                  | 844              | <=917           | <=957             |

**Table 8**

| SY2001–02 Amount of SRI Lexile Gain Needed to Maintain Equivalent FCAT-SSS Reading Achievement Levels |     |     |     |     |               |                  |     |     |     |     |               |
|---|-----|-----|-----|-----|---------------|------------------|-----|-----|-----|-----|---------------|
| Fall to Spring  |     |     |     |     |               | Spring to Spring |     |     |     |     |               |
| Grade   | 2–2 | 3–3 | 4–4 | 5–5 | Median Lexile | Grade to Grade   | 2–2 | 3–3 | 4–4 | 5–5 | Median Lexile |
| <b>2</b>  | n/a | n/a | n/a | n/a | n/a           | <b>1–2</b>       | n/a | n/a | n/a | n/a | n/a           |
| <b>3</b>  | 198 | 174 | 127 | 67  | 151           | <b>2–3</b>       | 269 | 236 | 174 | 93  | 205           |
| <b>4</b>  | 141 | 123 | 93  | 56  | 108           | <b>3–4</b>       | 182 | 187 | 161 | 98  | 172           |
| <b>5</b>  | 97  | 82  | 61  | 32  | 72            | <b>4–5</b>       | 101 | 136 | 165 | 201 | 151           |
| <b>6</b>  | 54  | 49  | 41  | 33  | 45            | <b>5–6</b>       | 43  | 57  | 57  | 42  | 50            |
| <b>7</b>  | 32  | 36  | 40  | 45  | 38            | <b>6–7</b>       | 43  | 76  | 109 | 119 | 93            |
| <b>8</b>  | 37  | 39  | 42  | 40  | 40            | <b>7–8</b>       | 109 | 162 | 149 | 155 | 152           |
| <b>9</b>  | 15  | 26  | 33  | 42  | 30            | <b>8–9</b>       | 190 | 190 | 145 | 45  | 168           |
| <b>10</b>   | 40  | 46  | 50  | 52  | 48            | <b>9–10</b>      | -32 | 38  | 43  | -19 | 10            |

Example: A fourth-grade student would have to grow 141 Lexile units to remain at the same achievement level in the spring.

Let us consider a few examples of how teachers and other professionals involved in the improvement of student reading performance can begin to set reading growth goals based on the SRI scores of their students. Let us assume that a teacher wants to find out the increase in SRI scores that is required for a fourth-grade student to stay at the same predicted achievement level, for example, level 2, from fall to spring of the school year. Table 8 can be used to estimate this amount.

A fourth-grade student with a fall SRI score corresponding to FCAT level 2 would have to grow 141 Lexile units to remain at the same achievement level in the spring. The equation for Grade 4 in Table 6 (see page 9) can then be used to calculate the predicted increase in FCAT-SSS Reading scores. The increase in FCAT scores is approximately .15 FCAT points per unit increase on the SRI, thus  $.15 \times 141 =$  approximately 21 points. This would translate into an FCAT-SSS developmental score of approximately 1443, which is just below the cut point for being in achievement level 3.

Let us consider one more example, again for Grade 4, only this time looking at the projected SRI score increase necessary to move from predicted FCAT level 2 to level 3. For convenience, we will use the spring SRI score that is equivalent to the predicted FCAT achievement level 3 as the end point. The difference between these two scores (i.e., 363 in the fall for level 2 and 643 in the spring for level 3) is 280 lexile units. This translates into an increase of approximately 42 FCAT units, and an ultimate FCAT-SSS developmental score that is well within the level 3 achievement band.

One important question to ask for any reading goal is if it is reasonable to expect such growth in the period of time being considered (usually from early fall to the time just before the administration of the FCAT in the spring). Recall that the ultimate aim is not necessarily to affect SRI scores, but rather to affect student reading level and FCAT-SSS Reading scores. In the absence of information about specific approaches to reading that a reading teacher may take to improving reading comprehension, we can, as a proxy, look at the typical increases that occur on the SRI from spring to spring. These increases can provide a sense of the typical growth that occurs in one school year period. If, further, we look at these increases across different portions of the normative distribution, we can gain a clearer sense of whether typical growth on the SRI varies depending on a student's starting point in the score distribution. Data relevant to this issue are presented in Table 9.

**Table 9**

| Spring-to-Spring Change in SRI Scores for Selected Percentiles |   |     |     |     |     |     |      |
|--|---|-----|-----|-----|-----|-----|------|
|  | Changes in SRI Scores (Lexiles) Grades 3–10 |     |     |     |     |     |      |
| Percentile   | 3–4   | 4–5 | 5–6 | 6–7 | 7–8 | 8–9 | 9–10 |
| <b>25th</b>  | 115   | 130 | 65  | 85  | 50  | 45  | 50   |
| <b>50th</b>  | 110   | 110 | 70  | 75  | 45  | 45  | 35   |
| <b>75th</b>  | 115   | 105 | 65  | 60  | 50  | 35  | 25   |

Students' starting point in score distributions can dictate amount of expected growth in the SRI.

## CONCLUSION

The information presented in this paper demonstrates how the Scholastic Reading Inventory (SRI) was administered in a systematic way to improve instruction in the context of state assessments being used to monitor and report student achievement. The results of this study reveal that the SRI statistically correlates to end-of-year state test results.

Due to this strong correlation, teachers can obtain the reading comprehension data they need throughout the year to monitor student progress, set goals, and adjust instruction appropriately. Most importantly, implementing the SRI supported this school district's goal of ensuring that all students achieved reading success.



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## ABOUT THE AUTHOR



Kim Knutson, Ed.D, is a test development and evaluation specialist for the School District of Palm Beach County, Florida. In this role, her primary contributions have included aligning results from the Scholastic Reading Inventory (SRI) to Florida Comprehensive Assessment Reading Test results, and developing a growth-goals model based on initial student performance and state reading standards.

Dr. Knutson completed her doctorate in Educational Leadership at Florida Atlantic University where she was awarded the Melby Fellow in Community Education. Prior to joining the School District of Palm Beach County, she was program director at the South Florida Annenberg Challenge where she facilitated grants to sustain school improvement initiatives. A frequent presenter at national conferences, Dr. Knutson has published articles on community education, self-directed learning, and leader social interest. At Florida Atlantic University and Barry University, Dr. Knutson has taught testing and evaluation, applied research methodology, and leadership theory to undergraduate and graduate students, and also serves as evaluation consultant. She has consulted with districts and schools in Florida and Massachusetts on the subject of aligning SRI results to state reading achievement levels and monitoring student growth in relation to state standards.

Dr. Knutson's extensive research with the SRI developed into a joint partnership with MetaMetrics and Boca Raton Community Middle School with the development of a school-wide demonstration of the Lexile Framework®. This project will generate data that will be used to study the relationship between reading growth and numbers of words of targeted text read per year.

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