

# Substantial Reading Gains for Third Grade Students during Summer Reading Intervention in Sarasota County Schools

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*This study investigated the program effects of Voyager Passport™ on the reading achievement of third grade students in the Sarasota County Schools who used this product as part of the summer intervention. This study used a pretest posttest quasi-experimental design. The study participants included 87 students in the third grades during the summer of 2006. Student growth was measured using oral reading fluency, as measured by the Vital Indicators of Progress (VIP®) Reading Connected Text (RCT) assessment. Students who participated in Voyager Passport showed greater than expected gain during the summer intervention session.*

## INTRODUCTION

Reading is a complex process of converting printed symbols into language and meaning and is among the most important scholarly activities a person masters. Students require at least grade-level reading ability to read literature and textbooks in the majority of school subjects (Henry, 2003).

Current research converges on the certainty that few students acquire reading naturally, and that most students benefit from explicit and direct, structured instruction (National Reading Panel, 2000). This research, based on sound, scientific observations and analyses, provides evidence for not only what instruction works, but why and how it works (Reyna, 2004). Those students who struggle learning to read are served as well in small groups of three to four students as they are individually (Torgesen, 2004; Vaughn & Linan-Thompson, 2003).

A review of research regarding summer learning loss indicates that on average students' grade-level equivalent is at least one month lower in the fall than it was at the end of the previous school year. Even normally achieving students typically experience learning losses when they do not engage in educational activities during the summer. Research shows that students often score lower on standardized tests at the end of summer vacation than they do on the same tests at the beginning of summer (Cooper, 2001).

The students in the third grade in the Sarasota County District, based on their spring FCAT scores, were invited into the summer reading intervention to improve their reading skills to the point where they could be promoted to the fourth grade and be successful. *Voyager Passport* was chosen as the reading intervention program during the summer session.

## METHODS

### Participants

During the summer of 2006, 184 students following their third grade school year attended the summer reading instruction using the *Voyager Passport* curriculum. These students were selected for the additional intervention due to spring FCAT scores. Of the 184 students, only 87 completed both the pre- and post-tests. Within the group of 87 students, 46 (52.9%) were male, 38 (43.7%) were female, and three (3.4%) were unknown. This group contained 20 (23%) Black students, 30 (34.5%) Hispanic students, three (3.4%) multiracial students, 31 (35.6%) white students, and three students without an ethnic designation. Limited English Proficient students made up just over a third of the population, 31 (35.6%) students.

### Implementation

The summer reading intervention was provided for 4 weeks (20 instructional days). Two *Voyager Passport* lessons were delivered every morning, for a total of 40 lessons across the intervention period. Summer teachers received training at the beginning of the program and received support from Voyager field implementation specialists. The teachers were responsible for the testing of the students and for placing the assessment scores into VPORT®, the Voyager data management system.

### Materials

*Voyager Passport* provides direct, systematic instruction in each of the essential reading components and is designed as an intervention program for students for whom the core reading program is not sufficient. The lessons are based on the scientific knowledge about effective reading instruction. The lessons address decoding strategies, fluency, and comprehension. Each student receives a set of individual instructional materials for the duration of the program.

*Phonemic Awareness:* To make the greatest gains in reading, students must learn to blend and segment individual sounds in words. Student gains in reading and spelling are strongest when print is integrated with phonemic awareness instruction (Hatcher, Hulme, & Ellis, 1994). For third grade students, the phonemic activities are integrated into the phonics and spelling lessons where students can apply knowledge of the alphabetic principle and coordinate orthographic, phonemic, and graphemic knowledge.

*Phonics:* Phonics instruction is the systematic use of sound-symbol relationships to teach the reading and writing of words. *Voyager Passport* utilized the extensive research base in phonics to develop systematic and explicit phonics and spelling lessons, shown to be the most effective way to ensure appropriate reading growth (National Reading Panel, 2000). The instruction builds in difficulty incorporating letter combinations, affixes, and strategies for decoding multisyllabic words. Words with irregular spelling patterns are also taught explicitly with extensive review.

*Fluency:* Fluency is the ability to accurately and quickly read text. Fluent reading allows readers to focus on comprehending and gaining meaning from text. Fluency instruction in *Voyager Passport* provides specific time for practicing reading and rereading text accurately, efficiently, and with expression. Once students can read connected text, repeated reading with feedback is an effective practice for improving fluency and reading achievement (Chard, Vaughn, & Tyler, 2002; Homan, Klesius, & Hite, 1993; National Reading Panel, 2000). As students develop more advanced reading skills, fluency lessons focus on text-level reading with teachers modeling appropriate reading rates and expression. Strategies for chunking text are also explicitly taught and timed readings motivate and challenge students to improve their reading rates.

*Vocabulary:* Vocabulary refers to the words a person understands and uses in listening, speaking, reading, and writing. Students learn word meanings through direct and indirect experiences with oral and printed language (Beck, McKeown, & Kucan, 2002; National Reading Panel, 2000). *Voyager Passport* addresses vocabulary instruction through a sequence of word introduction, with read-alouds, student passage reading, comprehension activities, and text discussions. The design allows repeated exposure to new vocabulary in a variety of contexts using oral and written language.

*Comprehension:* Comprehension is the ability to understand and gain meaning from language. Snow, Burns, and Griffin (1998) assert that the student needs both background knowledge and conceptual sophistication to understand the meaning of a word or

text. Students extract meaning as well as construct meaning as they build representations and gain new meaning (Snow & Sweet, 2003). *Voyager Passport* teaches strategies for understanding text, including teaching students to monitor their comprehension, organizing and retelling information presented, recognizing story structure, generating questions about the text, predicting outcomes in the text, and confirming or revising predictions (National Reading Panel, 2000; Pressley & Wharton-McDonald, 1997; Rosenshine, Meister, & Chapman, 1996).

## Assessments

*Voyager Passport* provides Vital Indicators of Progress (VIP<sup>®</sup>) measures which are one-minute individually-administered fluency indicators to monitor growth in *Voyager* Reading Programs. The cutoffs and goals are based on finding a point where the odds would be in favor (at least 80%) of the student achieving subsequent literacy outcomes as developed by the DIBELS<sup>™</sup> Benchmarks (Good, Simmons, Kame'enui, Kaminski, & Wallin, 2002). Results for the VIP benchmarks identify if a student is a struggling, an emerging, or an on-track reader.

The RCT measure (Reading Connected Text) is a standardized, individually administered test of reading fluency with connected text for students in grades 1 through 5 and above. RCT is a set of equivalent passages and administration procedures designed to identify students who may need additional instructional support, and to monitor progress toward instructional goals.

Student performance is measured by having students read a passage aloud for one minute. Words omitted, substituted, and hesitations of more than three seconds are scored as errors. Words self-corrected within three seconds are scored as accurate. The number of correct words per minute from the passages is the oral reading fluency rate which is reported as the "RCT score." The tool provides information on student performance in English.

Typically the DIBELS<sup>™</sup> (Dynamic Indicators of Basic Early Literacy Skills) goals are used with the VIP<sup>®</sup> fluency measures based on time of year (Good, Simmons, Kame'enui, Kaminski, & Wallin, 2002). The Hasbrouck and Tindal Oral Reading Fluency Norms (2006) are mentioned as a point of reference for oral reading fluency where appropriate. The DIBELS/VIP passages however are standardized passages based on end of grade level reading targets and calibrated across nine readability formulas. Hasbrouck and Tindal Norms were developed using data collected from real teachers across the nation using the text they selected individually perceived as grade level text. In both cases the samples for the norms are quite substantial and provide valuable

and reliable reference points for oral reading fluency. For the purposes of this study, the end of year DIBELS goal of 110 words per minute is used.

### Data Gathering and Analysis

Each teacher was responsible for the administration and recording of student scores into the VPORT system at the beginning and ending of the summer session. Students who completed both RCT assessments were included in the analysis. Effect size was computed using Cohen's *d* (Cohen, 1988).

## RESULTS

### Participation Level

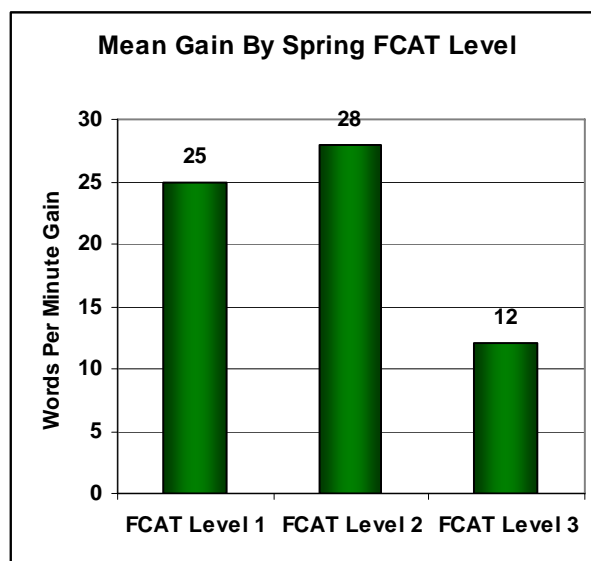
During the summer of 2006, 184 grade 3 students at seven schools in the Sarasota School District in Florida used the Passport program in a summer school setting for students who had previously failed *Florida's Comprehensive Assessment Test (FCAT)*. Eighty-two percent of the participants had reported *FCAT* achievement levels, with 64% at Level 1, 17% at Level 2, 16% at Level 3 and 3% at Level 4. Students were relatively evenly divided between gender: 46% female and 57% male (1% was unreported). Ethnic or racial background of participants was African American (22%), Hispanic (28%), White (40%), Asian (.5%), Multiethnic (3%) and 6% unreported. English proficiency was reported as 64% proficient, 30% limited English proficient (LEP) and 6% unreported.

### Assessment Results

Gain in RCT scores was analyzed for gender, ethnicity, English proficiency and *FCAT* spring achievement level differences, using analyses of variance. All analyses used a .05 criterion for identifying statistical significance and  $\eta^2$  was used to consider effect size.

*Demographic variables.* Gains in fluency as measured by the RCT scores were not significant for gender, or ethnicity. However, limited English proficient students had a statistically significantly higher mean gain in reading fluency than English proficient students [ $F(1, 82) = 4.607, p = .035, \eta^2 = .053$ ]. The mean gain for English proficient students was 20.9, while the gain for LEP students was 30.0.

*FCAT achievement levels.* Although the difference in mean fluency gain was not statistically significant [ $F(1, 72) = 1.405, p = .252$ ], students receiving an achievement level of 1 (mean gain = 25) or 2 (mean gain = 28) had twice the gains in fluency as those scoring at level 3 (mean gain = 12).



Effect size is a way of determining if an intervention made a difference or had the intended result of improving student performance. The effect size indicates how much the mean or average of the group is moved as the result of the intervention, as measured by the assessments. Effect sizes are based on unadjusted pre- and post-test means. Effect sizes are calculated by dividing the difference between pre- and post-test means by the pooled standard deviation of the pre- and post-tests. An effect size of 1.0 indicates the mean of the group moved a full standard deviation between assessments. An effect size of 0 indicates the group made no improvement between assessments. Generally, an effect size of .2 is considered a small effect, .5 is moderate, and .8 is large (Cohen, 1988).

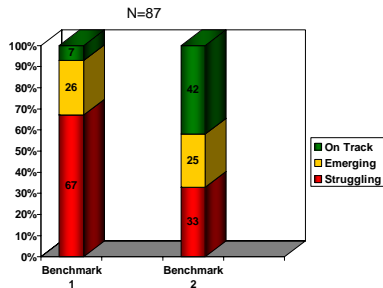
The average pretest fluency score fell between the 10<sup>th</sup> and 20<sup>th</sup> percentile based on Hasbrouck and Tindal (2006) oral reading fluency norms. The average posttest fluency score fell between the 30<sup>th</sup> and 40<sup>th</sup> percentile based on Hasbrouck and Tindal norms.

Eighty-seven students participated in the full four week (20 day) summer implementation of Passport. At the beginning of the summer 67% (n=58) of the students began in the struggling category based on their oral reading fluency rate as measured by RCT. By the end of the four weeks, 43% (n=25) of the students made enough progress to move into the emerging category and 7% (n=4) of the students made enough growth to move into the On Track category based on their Benchmark 2 (posttest) oral reading fluency score (RCT).

At the start of the summer Passport implementation 26% of the students (n=23) began in the emerging category based on their oral reading fluency rates. At the end of the four weeks, 61% of the students (n=14) made enough

progress to move in to the on-track category based on their benchmark 2 RCT score. The graph below depicts the movement of students into more proficient oral reading fluency categories.

Sarasota Summer Third Grade Passport Status on Key VIP® Literacy Skill (RCT)



The following table presents the results of the pre- and post-tests, along with standard deviations (SD) and Cohen's *d* for each group of students.

|                 | N  | Pre-Test | SD     | Post-Test | SD     | Cohen's <i>d</i> |
|-----------------|----|----------|--------|-----------|--------|------------------|
| Overall         | 87 | 65.09    | 27.690 | 90.13     | 27.794 | 0.90***          |
| Gender          |    |          |        |           |        |                  |
| Males           | 46 | 65.59    | 29.480 | 91.85     | 28.606 | 0.90***          |
| Females         | 38 | 64.92    | 25.884 | 86.84     | 27.276 | 0.82***          |
| Ethnicity       |    |          |        |           |        |                  |
| Black           | 20 | 81.40    | 22.319 | 102.50    | 25.086 | 0.89***          |
| Hispanic        | 30 | 64.77    | 27.640 | 93.80     | 27.655 | 1.05***          |
| Multiracial     | 3  | 75.33    | 30.665 | 100.67    | 37.581 | 0.74             |
| White           | 31 | 54.42    | 26.609 | 76.10     | 24.519 | 0.85***          |
| Limited English |    |          |        |           |        |                  |
| LEP             | 31 | 60.48    | 26.749 | 90.55     | 28.158 | 1.09***          |
| Non-LEP         | 53 | 68.09    | 28.185 | 89.02     | 28.094 | 0.74***          |

\*\*\* p < .001

## DISCUSSION

Students made substantial gains during the summer intervention. It is likely that this intensive dosage of intervention in larger quantities of time than would occur during a typical school day gave these students the boost in reading that they needed. Reading instruction for struggling readers is most effective when taught in small groups and summer intervention affords that opportunity. The explicit lessons move at a quick pace to ensure students have ample practice opportunities while using every minute of instructional time. The feedback students received during connected text reading proved to have an impact on their fluency. Incorporating practice and judicious review in daily lessons provides the setting where reading growth is at its highest (Coyne, Kame'enui, & Simmons, 2001).

## CONCLUSION

Students participating in the 2006 summer reading intervention in Sarasota, as measured by having two assessments, all showed remarkable gain for a short period of time. This allowed these students to start the next school year in a good position to sustain the growth. It appears that Passport provided students with opportunities to practice reading text at their instructional level with support and instruction that enabled them to increase their overall oral reading fluency rates. The students with matched scores realized a tremendous and significant gain in their oral reading fluency according to the scores entered in VPort. The growth in oral reading fluency has increased the likelihood that students will be able to engage in grade-level content across subject areas where reading is required.

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