EVALUATION OF STUDENT ACHIEVEMENT IN KENTUCKY'S READ TO ACHIEVE PROGRAM 2006-2007

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Background

Kentucky's Read to Achieve (RTA) program, established in 2005 by Senate Bill (SB) 19, was designed to improve the reading achievement of Kentucky's primary students. SB19 charged the Collaborative Center for Literacy Development (CCLD) to create a comprehensive research agenda to consider the impact of various reading and intervention programs on student achievement in reading. During the 2005-2006 school year, CCLD conducted a statewide study of the approximately 210 schools that received grant funds as part of the RTA program. CCLD continued its evaluation of RTA in 2006-2007.

Data Source

A norm-referenced reading achievement test, the Group Reading and Diagnostic Evaluation (GRADE), was administered fall and spring to all primary students. To estimate the impact of the RTA program, fall to spring gains were compared for RTA students.

Demographics

Number of schools included in the data analysis: 310
Estimated number of students receiving RTA intervention: 16,961
Estimated number of students served by an RTA intervention teacher: 9,598
This is the set of students whose achievement was analyzed for this report.

Findings

What was the overall reading progress of students who received intervention in RTA schools? What was the overall progress of students who did not receive intervention in RTA schools?

Students who received RTA services made strong gains from fall to spring on the GRADE assessment. Gains decreased for each grade level, meaning that younger students made greater gains than older students.

Students who received RTA services made larger gains than the students in RTA schools who did not receive RTA services. P3 and P4 students who received RTA intervention significantly outscored P3 and P4 students who did not receive RTA intervention.

70% of RTA students who scored below the 3rd stanine in the fall scored at or above the 3rd stanine on the spring GRADE test. That is, they were no longer considered struggling readers after having received RTA services.

What was the relative reading progress of students who received intervention services through various intervention programs?

The most widely used intervention programs for P2 were: Reading Recovery, Early Success, Early Intervention in Reading, SRA/Reading Mastery, and FastForWord. P2 students who received SRA/Reading Mastery, Reading Recovery, or Early Success made the greatest gains from fall to spring on the GRADE.

The most widely used intervention programs for P3 and P4 were Early Success/Soar to Success, Guided Reading, Literacy Groups, SRA/Reading Mastery, and Early Literacy. P3 students who received instruction through Literacy Groups, Early Success, and SRA/Reading Mastery made the greatest gains; P4 students who received Guided Reading made the greatest gains.

What was the reading progress of students from racially diverse backgrounds who received intervention?

Caucasian RTA students scored higher, on average, in the spring than African-American and Hispanic students at every grade level, but the differences between groups were smaller than in previous evaluations. In P3, African American RTA students gained more, on average, than their counterparts; however, in P4 the students gained less than other groups.

What was the progress of economically disadvantaged students who received intervention?

The achievement gap between economically advantaged and economically disadvantaged RTA students persisted from last year's evaluation. RTA students from economically disadvantaged backgrounds made gains, but less than RTA students from economically advantaged backgrounds.

What was the reading progress of students with disabilities who received reading intervention?

RTA students with disabilities made reading gains from fall to spring, but did not gain at the same rate as RTA students without disabilities.

RTA students with disabilities made greater gains than did their disabled counterparts who attended RTA schools but did not receive RTA intervention.

P3 and P4 students with learning disabilities made stronger gains from fall to spring than did students with physical disabilities.

Recommendations

Evaluation data show that Read to Achieve helps struggling primary readers make as much or more progress than typical students at the P2, P3, and P4 grade levels. RTA should be continued and expanded so that all students who qualify for RTA services can receive them.

Disaggregated evaluation data show that primary students at all grade levels and within all diversity groups improve their achievement with RTA intervention, but students from economically disadvantaged and non-Caucasian backgrounds have lower achievement gains. Intervention teachers must insure that all students receive instruction that is responsive to diverse learning styles and cultural expectations.

The data collection and analysis process for this evaluation was laden with difficulties. In order for CCLD to perform its duties, it needs timely, clean, and complete data sets. KDE and CCLD have made a plan for ameliorating the problems and this plan needs to be monitored and implemented.

Given the difficulty with assessing young readers at the P1 and P2 level as well as the lack of normally distributed spring NCE scores, it may be prudent to investigate other measures that can be individually administered.

Evaluation of
Student Achievement in
Kentucky's Read to Achieve Program
2006-2007

In 2005, Senate Bill 19 established the Read to Achieve (RTA) program to improve the reading achievement of Kentucky's primary students. This legislation charged the Collaborative Center for Literacy Development (CCLD) with creating a comprehensive research agenda that considers the impact of various reading and intervention programs on student achievement in reading. In response to the research requirements listed in SB 19, CCLD conducted a statewide study of the 311 schools that received grant funds in Rounds One, Two, and Three as part of the RTA program. Based on the requirements outlined in SB19, the major research questions that guided this study were:

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1. What was the overall reading progress of students who received intervention in RTA schools? What was the overall progress of students in RTA schools who did not receive intervention?
2. What was the relative reading progress of students who received RTA intervention services through various intervention programs?
3. What was the reading progress of students from racially diverse backgrounds who received RTA intervention?
4. What was the progress of economically disadvantaged students who received RTA intervention?
5. What was the reading progress of students with disabilities who received RTA reading intervention?

During the second year of this evaluation, 311 elementary schools received funds to serve struggling elementary school readers by implementing reading intervention programs. In these schools, a total of 77,363 primary grade students were required to take the *Group Reading Assessment and Diagnostic Evaluation* (GRADE) in fall 2006 and spring 2007, and of these students, 8,851 (11%) received intervention by an RTA-funded teacher. Of these students, 929 (10%) were from underrepresented populations and 4,786

(54%) were from economically disadvantaged homes. These statistics demonstrated an increase in RTA intervention as compared to the Year One (2005-2006) of the grant initiative. Moreover, ninety-eight (98) more schools were served (an increase of 48%).

The RTA schools implemented a variety of intervention programs in each of the primary grades. Some programs are designed for use in one grade; others provide several levels of instruction and can be used in more than one grade. In all, 38 intervention models were implemented, which is similar to Year One where 37 models were reported. Table 1 lists the programs that were used by more than 10 schools for each primary grade, and these programs are described in Appendix A.

Table 1.

RTA Intervention Models: Most Widely Adopted Models for Each Grade Level.

Grade Level	RTA Reading Model	Number of Schools
P1 (K)		
	Early Success	19
	Early Intervention in Reading (Taylor)	13
	Fast ForWord	14
	Literacy Groups	37
	Reading Mastery (SRA)	21
P2 (1st)		
	Early Success	30
	Fast ForWord	12
	Reading Recovery	201
	Reading Mastery (SRA)	21
P3 (2nd)		
	Early Literacy/Guided Reading	71
	Early Success	58
	Fast ForWord	12
	Literacy Groups	30
	Reading Mastery (SRA)	21
P4 (3rd)		
	Early Literacy/Guided Reading	72
	Early Success	58
	Fast ForWord	12
	Literacy Groups	37
	Reading Mastery (SRA	22

Methods

It is the goal of the RTA intervention initiative to help primary grade children who are reading at or below grade level to make reading progress commensurate with or exceeding that of the students who do not receive intervention. Thus, in this analysis, we compared the reading gains of students who received the intervention of an RTA teacher to the reading gains of all other students, such as those students who qualify for RTA but do not receive it and those who are reading at or above grade level.

In order to compare the reading achievement of all students across the various RTA intervention programs, a standardized measure of reading achievement, the GRADE, was administered to all primary students who attended a school funded by RTA. The GRADE was administered at both the beginning of the school year and again at the end of the school year. Each student's progress in reading was measured by calculating the difference between the student's GRADE scores in fall and spring. The difference between the two scores is the *gain* in the student's reading and is thus a measure of reading progress.

Student gain is reported in two ways by the GRADE: Normal Curve Equivalents (NCE) and by Growth Scale Values (GSV). Each of these scales is an equal interval scale that can be used to compare student growth across groups (Pearson Learning, 2006). The mean NCE score is 50 and an average reader who scores NCE 50 in the fall and learns an appropriate amount of reading during the school year, will score NCE 50 in the spring. NCEs range from 1 to 99, with a mean of 50 and a standard deviation of about 21. Because NCEs are normally distributed, about 68% of the scores are expected to be between 29 and 71, and about 95% are expected to fall between 8 and 92.

GSVs are a more precise measurement that can be useful in understanding a student's longitudinal progress in relation to the reading task. On the GRADE, reading is measured from first through grade 12 on a scale of 100 to 800. During the beginning stages of learning to read, students typically make a great deal of measurable progress; students in early primary are expected to gain about 40 GSV points each year and the mean for the grade level increases from fall to spring. By the end of third grade, the GRADE test predicts a mean GSV score of 434. In each grade thereafter, GSV gain scores fall to around 20 points per grade level.

Mean GSV scores, which correspond to NCE 50, for the P2 (1^{st}) through P5 (4^{th}) grade levels and the expected gain score ranges are reported in Table 2.

Table 2.

Mean GSV scores and expected gains during the elementary school years.

Level	Semester	Mean	Range of Scores	Expected Gain at this Grade
P2 (1st)	Fall	340	303-377	36-42
P2 (1st)	Spring	379	339-419	
P3 (2nd)	Fall	380[a.]	340-420	38-42
P3 (2nd)	Spring	420	382-458	
P4 (3rd)	Fall	419	384-454	13-17
P4 (3rd)	Spring	434	401-467	
P5 (4th)	Fall	438	405-471	20-22
P5 (4th)	Spring	459	427-291	

[a.] This score was extrapolated from available scores on the sample grade reports (Pearson Learning, 2006; Pearson Learning Group, 2006).

Both GSV and NCE scores have usefulness in this report. GSV scores can demonstrate whether students are making significant progress along a reading task and whether their achievement is accelerated compared to their typical peers. NCE scores can show that students are moving from a lower NCE score (or a lower stanine) to a higher score (or a higher stanine). The Kentucky Department of Education (KDE) established a cutoff score of stanine 4 for students to qualify for RTA. Thus, it was expected that RTA would help students who were lower than stanine 4 in the fall to move to higher stanines in spring.

However, other diagnostic tests, such as the Clay Observation Survey, are sometimes used in addition to the GRADE to determine a student's need for intervention. Indeed, there is some warrant for additional testing. According to Waterman (2005), the GRADE is "an appropriate tool for monitoring progress toward broad reading curricular objectives" (Mental Measurements Yearbook, p. 4) but that "the fall and spring assessment cycle is not useful for the short-term repeated measurement necessary for monitoring student progress through the instructional curriculum of the classroom" (Mental Measurements Yearbook, p. 5). Other curriculum-based assessments may be more useful than the GRADE in tailoring instruction and monitoring its benefits. However, the use of these additional qualifying tests can permit students whose GRADE scores exceed stanine 3 to receive RTA services. Therefore, this analysis reports both the advancement of students beyond the 3rd stanine as well as the NCE *gain* of students.

Two limitations to the statistical analyses must be understood before examining the data. First, the achievement scores for the P1 (kindergarten) level appear to be biased. As in 2005-2006's GRADE results, the P1 students as a group scored unusually low in the fall and unusually high in the spring, resulting in a skewed distribution of scores. Thus, this report does not report the scores for the P1 students for 2006-2007 due to due to the apparent lack of normality of the P1 NCEs.

A second limitation in the 2006-2007 data occurred due to difficulty in accessing the GRADE scores. In many schools the student identification numbers were changed between the fall and spring tests and without a student identifier, it was impossible to compare a student's fall score to his/her spring score. Efforts to create a "key" to match the fall to the spring identifiers were successful in finding a match for the majority of students. The data reported here represent nearly 85% of the total number of primary students who were enrolled in RTA schools and the best efforts of the CCLD and the KDE analysts to reconstruct the student lists and to analyze the effectiveness of the RTA initiative. Where appropriate, estimates of the total number of students served and their progress will be given.

Because of these limitations in the data, this analysis took care to calculate the numbers of students receiving RTA services and the types of services they received. In 2006-07, KDE reported 751 elementary schools in operation (Kentucky Department of Education, 2007). Three hundred and eleven (311) or 41.4% of these were approved for RTA funding in 2006-07. The data base used to conduct these analyses contained 310 RTA schools and 69,435 students in P1 (kindergarten) through P4 (3rd grade) in those schools. The database also demonstrated that of the 69,435 students, 9,598 students received intervention from an RTA-funded intervention teacher. In addition, 5,150 students received intervention from an RTA-funded program, but were not taught by an RTA-funded teacher. Finally, 8,867 primary students received intervention from programs that were funded from sources other than RTA.

Using these numbers from the database, an estimate of the number of children who were served by RTA and by other intervention programs was calculated. Table 3 shows the results.

Table 3.

Estimated numbers of primary students served by RTA schools.

	In the database (85%)	Extrapolated estimate (115%)
Number of primary students enrolled in RTA-funded schools	69,435	79,850
Students served by an RTA-intervention teacher	9,598	11,038
Students served by an RTA program but not by an RTA-teacher	5,150	5,923
Students served by other intervention programs not funded by RTA	8,867	10,107
Total number of students receiving RTA intervention	14,748	16,961

Thus, the total number of students in the database who received one or more types of RTA intervention was estimated to be 16,961.

For this analysis, we chose to use the number of students served by an RTA-intervention teacher. We reasoned that the best information about the effectiveness of RTA would be derived from the strongest intervention. The RTA teacher is a highly-trained literacy instructor who uses an RTA-funded program and meets with the RTA students regularly. In schools where RTA programs were used by other (not designated to be intervention) teachers, the impact and regularity of instruction were not immediately discernable. Therefore, the number of student records analyzed was 9,598.

We also decided to eliminate the records of students who scored lower than 1 NCE on the fall test. These students were those who were unable to mark the test adequately or who perhaps had no measurable skills in reading at the beginning of the year. Without a firm basis in reading skills for the fall administration, it would be impossible to calculate accurate gain scores. The total number of students who scored less than 1 NCE was 2,035 as shown in Table 4. Almost 37% (n = 747) of these students were served by an RTA teacher, while 63% (n = 1288) were not. Obviously, the GRADE test is difficult for students in the earliest primary grades.

Table 4.

Number of students who had an NCE less than 1 on the Fall administration of the GRADE.

Level	RTA-Funded Intervention Teacher	Frequency
P1 (K)	No	99
	Yes	25
P2 (1st)	No	417
	Yes	387
P3 (2nd)	No	456
	Yes	257
P4 (3rd)	No	316
	Yes	78

Therefore, the achievement results below represent the scores of P2, P3, and P4 students who studied reading with an intervention teacher and who scored greater than 1 NCE on the fall administration of the GRADE test.

Student Achievement Results

What was the overall reading progress of students who received intervention in RTA schools? What was the overall progress of students in RTA schools who did not receive intervention?

Students at all primary levels showed significant gains in reading from fall to spring. Table 5 shows mean NCEs for fall and spring for students who received RTA intervention services. P2 students made the greatest gains and gain scores decrease as grade levels increase, indicating that younger students tended to make greater gains across the year than older students. In addition, Table 3 shows that beginning of the school year mean scores for all three groups were below average (lower than NCE 40) and, end of school year means for two groups were at the average for NCEs. The P4 group, who made the smallest gain, was just below average at NCE 37.68. Table 6 shows the same achievement gains expressed in GSV scores.

Table 5.

Achievement gains (in NCEs) for primary students who received RTA intervention.

Level	N	Fall NCE (SD)	Spring NCE (SD)	NCE Gain (SD)
P2 (1st)	3,109	22.26 (12.39)	46.54 (19.44)	24.05 (18.90)
P3 (2nd)	2,040	22.58 (11.52)	42.45 (18.27)	19.86 (13.75)
P4 (3rd)	1,884	24.38 (11.80)	37.68 (16.34)	13.30 (12.57)

Table 6.

Achievement gains (in GSVs) for primary students who received RTA intervention.

Level	N	Fall GSV (SD)	Spring GSV (SD)	GSV Gain (SD)
P2 (1st)	3,109	306.82 (20.11)	367.19 (32.38)	60.36 (32.62)
P3 (2nd)	2,040	352.64 (17.02)	402.05 (25.96)	50.40 (22.88)
P4 (3rd)	1,884	380.53 (19.71)	413.59 (26.64)	33.06 (20.41)

To explore potential effects of the RTA program on students who received intervention services, the reading gains of students who did not receive RTA intervention were analyzed. These data are reported in Tables 7 and 8. Table 7 demonstrates that students who were not served by an RTA intervention teacher also improved in reading during the school year. P2 students showed the most gain (a mean of NCE 23.93). P3 and P4 students who did not receive intervention made less gain, but are shown to be above the average NCE of 50 in their spring scores. Table 8 represents these same achievement gains in GSVs.

Table 7.

Achievement gains (in NCEs) for primary students who did not receive RTA intervention.

Level	N	Fall GSV (SD)	Spring GSV (SD)	GSV Gain (SD)
P2 (1st)	13,029	43.60 (21.69)	67.59 (21.87)	23.93 (17.38)
P3 (2nd)	14,944	48.39 (20.59)	61.39 (18.27)	13.00 (13.75)
P4 (3rd)	15,779	47.42 (19.23)	57.80 (19.91)	10.36 (10.92)

Table 8.

Achievement gains (in GSVs) for primary students who did not receive RTA intervention.

Level	N	Fall GSV (SD)	Spring GSV (SD)	GSV Gain (SD)
P2 (1st)	13,029	335.73 (32.08)	405.44 (41.28)	69.70 (33.70)
P3 (2nd)	14,944	393.82 (35.42)	433.70 (30.96)	39.87 (24.13)
P4 (3rd)	15,779	419.63 (32.42)	445.93 (32.89)	26.30 (18.52)

Thus, all of the students in the RTA schools made substantial reading progress during this evaluation year, including those students who received intervention as well as those who did not. Most groups, both those who received RTA intervention as well as those who did not, made considerable and sometimes unexpected gains. Table 9 compares the gain scores of students who did and did not receive intervention at each age group.

Table 9.

Comparison of achievement gains of students in RTA schools.

Level	Student Group	N	GSV Gain (SD)	NCE Gain (SD)
P2 (1st)	RTA	3,109	60.36 (32.62)	24.05 (18.90)
	Not RTA	13,029	69.70 (33.70)	23.93 (17.38)
P3 (2nd)	RTA	2,040	50.40 (22.88)	19.86 (13.75)
	Not RTA	14,944	39.87 (24.13)	13.00 (13.75)
P4 (3rd)	RTA	1,884	33.06 (20.41)	13.30 (12.57)
	Not RTA	15,779	26.30 (18.52)	10.36 (10.92)

At all grade levels, students who received RTA intervention grew more in reading than their non-RTA counterparts, on average, according to their NCE gain. RTA upper primary students also made greater GSV gains, on average, than their non-RTA counterparts. Only non-RTA P2 students achieved a higher overall GSV score, on average, than their RTA counterparts, although both groups made considerable progress.

To further examine the achievement of students who received intervention services, RTA students' GRADE stanine gains were examined. Based on fall to spring stanine gains, approximately 70% of primary intervention students who were deemed struggling readers in the fall (scoring in stanines 1, 2, and 3) had made enough progress by spring to be considered average or above average in reading (scoring in stanines 4 through 9). Table 10 shows the percentage of intervention students at each grade level who made sufficient stanine gains to be considered having average or better reading performance after receiving intervention services. A greater percentage of P2 and P3 students improved in reading than did P4 students, showing the importance of early identification and intervention for struggling readers.

Table 10.

RTA intervention student status in spring based on GRADE stanines.

Level	Number of students in the RTA group	Number (percent) of students in stanines 1-3 after RTA intervention	Number (percent) of students in stanines 4-9 after RTA intervention
P2 (1st)	3,109	807 (26.0%)	2,302 (74.0%)
P3 (2nd)	2,040	570 (27.9%)	1,470 (72.1%)
P4 (3rd)	1,884	728 (38.6%)	1,156 (61.4%)

What was the relative reading progress of students who received RTA intervention services through various intervention programs?

Table 11 shows the NCE gains made by primary students whose intervention teachers used one of the most popular intervention programs (i.e., programs serving 100 or more students). In P2, the most widely-used program, Reading Recovery, moved 1,890 students from an average 21.50 NCE to 45.74 NCE, a 24.21 NCE gain. Early Success and SRA/Reading Mastery had similar success with P2 students. In P3, four out of five models moved students above NCE 40 and students in Early Success, Literacy Groups, and SRA/Reading Mastery, on average, achieved a gain of more than NCE 20. P4 students who received intervention through Guided Reading, Literacy Groups, and Soar to Success made slightly more gains than those who participated in SRA/Reading Mastery and Early Literacy. As reported in 2005-2006, the most widely-used programs seemed similarly effective in improving the performance of struggling readers.

Table 11.

Fall and spring achievement results for P2-P3 students in RTA programs.

Level Program	N	Fall (SD)	Spring (SD)	Gain (SD)
P2 (1st)				
Early Success	354	24.03 (12.86)	48.27 (19.54)	24.24 (20.63)
Reading Recovery	1,890	21.50 (11.80)	45.74 (18.87)	24.21 (18.67)
SRA/Reading Mastery	246	27.83 (15.72)	53.32 (20.76)	24.49 (17.80)
P3 (2nd)				
Early Success	512	22.84 (11.04)	43.84 (15.54)	20.00 (14.70)
Guided Reading	166	21.89 (11.61)	39.78 (15.66)	17.89 (15.12)
Literacy Groups	222	22.49 (10.22)	44.05 (16.63)	21.56 (14.61)
SRA/Reading Mastery	201	22.87 (10.68)	43.40 (14.14)	20.54 (12.38)
Early Literacy	194	22.42 (12.22)	41.28 (14.76)	18.87 (13.84)
P4 (3rd)				
Guided Reading	187	23.97 (12.57)	38.58 (17.41)	14.61 (13.85)
Literacy Groups	192	24.18 (12.46)	38.03 (17.15)	13.84 (20.64)
Soar to Success	540	28.75 (12.15)	39.28 (16.07)	13.52 (12.45)
SRA\Reading Mastery	167	25.34 (10.99	39.25 (15.91)	12.92 (10.72)
Early Literacy	204	22.25 (12.16)	34.99 (17.37)	12.74 (14.89)

What was the reading progress of students from racially diverse backgrounds who received RTA intervention?

To answer this question, the progress of students from different racial backgrounds was compared. In past studies, the reading achievement of Caucasian students who received RTA instruction has been higher than any other racial/ethnic group. Moreover, a noticeable achievement gap was observed before and after RTA intervention between Caucasian and African-American students. Table 12 shows the results from this 2006-2007 evaluation.

Table 12.

Fall and spring achievement results (NCEs) for RTA students by race/ethnicity.

Level	N	Fall (SD)	Spring (SD)	Gain (SD)
P2 (1st)				
African-American	233	24.48 (13.09)	44.11 (17.66)	19.62 (18.22)
Caucasian	2,643	22.21 (12.23)	46.75 (19.61)	24.51 (18.98)
Hispanic	110	23.94 (13.42)	45.93 (19.28)	21.99 (18.22)
P3 (2nd)				
African-American	168	21.60 (10.12)	41.85 (13.72)	20.25 (13.67)
Caucasian	1,732	22.60 (11.52)	42.48 (15.41)	19.88 (13.87)
Hispanic	57	21.70 (12.31)	41.61 (15.85)	19.91 (13.62)
P4 (3rd)				
African-American	141	25.53 (11.76)	34.11 (15.45)	8.57 (11.75)
Caucasian	1,643	24.18 (11.70)	37.93 (16.30)	13.74 (12.60)
Hispanic	33	25.61 (13.25)	35.88 (19.58)	10.27 (11.57)

The results of this analysis are interesting in that in some ways they contradict earlier findings. In P2, for example, African-American students who received early intervention started the year with the highest mean of all groups (NCE 24.48), but gained less (NCE 19.62) than other groups and ended the year with the lowest mean score (NCE 44.11). In P3, African-American RTA students made the greatest mean gain and all groups ended the year with similar means (within < 0.1 NCE point of each other). In P4; however, African-American students made lower gains compared to other groups and

also achieved the lowest mean score on the spring test. At every grade level, Caucasian students ended the year with the highest mean, although at the P2-P3 level the differences found between groups were negligible.

Hispanic RTA students, who comprised only 2% of the students who were served by an RTA teacher made less gain in P2 and P3 than Caucasian students, but made greater gain than African-American students in those years. In P3, all three groups made similar gains and ended the school year with similar means.

What was the progress of economically disadvantaged students who received RTA intervention?

In past studies, students from economically advantaged backgrounds outperformed students from disadvantaged backgrounds. Table 13 demonstrates that this finding persists in the current study. At each grade level, economically advantaged RTA students began the year with higher scores, gained more during the year, and ended the year above NCE 40. P2 and P3 students who were economically disadvantaged also gained enough to bring them to above NCE 40.

Table 13.

Fall and spring achievement results (NCEs) for RTA economically disadvantaged and advantaged students.

Level / Economic Level	N	Fall (SD)	Spring (SD)	Gain (SD)
P2 (1st)				
Disadvantaged	1,791	21.99 (12.37)	44.40 (19.41)	22.39 (18.81)
Advantaged	1,321	23.11 (12.40)	49.43 (19.13)	26.31 (18.79)
P3 (2nd)				
Disadvantaged	1,203	21.99 (11.18)	41.05 (14.77)	19.06 (13.77)
Advantaged	837	23.42 (11.95)	44.45 (15.55)	21.03 (13.65)
P4 (3rd)				
Disadvantaged	1,127	23.33 (11.64)	35.89 (16.30)	12.56 (12.77)
Advantaged	757	25.94 (11.86)	40.35 (16.05)	14.41 (12.21)

What was the reading progress of students with disabilities who received RTA reading intervention?

Read to Achieve serves a number of students with disabilities. In past studies, children with disabilities were grouped as a whole and their reading achievement was compared to children without disabilities. The findings were categorical: children with disabilities made achievement gains at every grade level, but were outperformed by children without disabilities (Kentucky Literacy, 2006, p.11). The data in Table 14 indicate the same pattern; at every grade level, students with disabilities started the year at a lower NCE and gained less during the year than their non-disabled counterparts.

Table 14.

Achievement gains (NCEs) for RTA students with and without disabilities.

Level	N	Fall (SD)	Spring (SD)	Gain (SD)
P2 (1st)				
Disabled	647	21.07 (11.68)	42.19 (19.72)	21.12 (19.23)
Not disabled	2,462	22.85 (12.54)	47.68 (19.21)	24.83) (18.74)
P3 (2nd)				
Disabled	444	20.49 (11.69)	39.41 (15.96)	13.96 (12.47)
Not disabled	1,596	23.16 (11.63)	43.44 (15.18)	20.27 (13.86)
P4 (3rd)				
Disabled	536	21.69 (11.65)	33.34 (16.50)	11.65 (12.70)
Not disabled	1,348	25.45 (11.68)	39.41 (15.96)	13.96 (12.47)

For this study, we decided to take a closer look at this variable. First, students with disabilities were separated into two groups: those who received RTA and those who did not. The results are shown in Table 15. Notably, the students with disabilities who received RTA scored 18 to 23 NCE lower in the fall than students with disabilities who did not receive RTA. However, with RTA intervention, the P3 and P4 RTA students with disabilities made greater NCE gains than the non-RTA students. P2 students with disabilities made similar amounts of gain regardless of RTA intervention.

Table 15.

Achievement gains (NCEs) for students with disabilities who received RTA intervention and those who did not.

Level / Program	N	Fall (SD)	Spring (SD)	Gain (SD)
P2 (1st)				
RTA	732	18.45 (12.85)	41.06 (19.60)	22.90 (19.50)
No RTA	1,874	37.22 (21.40)	60.46 (23.78)	23.82 (18.20)
P3 (2nd)				
RTA	491	17.54 (12.49)	35.25 (16.33)	19.34 (13.20)
No RTA	2,248	40.26 (20.87)	52.56 (20.74)	13.89 (13.51)
P4 (3rd)				
RTA	473	21.51 (11.98)	32.96 (16.47)	11.51 (12.41)
No RTA	2,489	39.55 (20.31)	49.57 (22.44)	10.18 (10.88)

In this year's evaluation, categories were created to analyze to what extent different types of disabilities might impact reading intervention. Specifically, we created four disability categories: physical disability, learning disability, behavioral/emotional disability, and other disabilities. Then, similar disability labels were grouped under each category. Table 16 shows the disability categories and labels.

Table 16.

Disability categories and corresponding disability labels.

Disability	Category Detail
Physical	
	Physical Disability/ Orthopedic Impairment
	Hearing Impaired
	Visually Impaired
	Other Health Impairment
	Deaf/Blind
Learning	
	Developmentally Delayed
	Mild Mental Disability
	Multiple Disabilities
	Autism
	Functional Mental Disability
	Traumatic Brain Injury
	Communication Disability
Behavioral/Emotional	
	Behavioral/Emotional Disability
Other	
	Other Disabilities
	504 Plans

Table 17 shows the relative reading achievement of RTA students with and without learning, physical, and behavioral/emotional disabilities at each grade level, as compared to RTA students without disabilities at that level**.**

Table 17.

Fall and spring achievement results (NCEs) for RTA students with and without specific disabilities.

Level	N	Fall (SD)	Spring (SD)	Gain (SD)
P2 (1st)				
Learning Disability	683	18.70 (12.82)	41.18 (19.63)	22.76 (19.45)
Physical Disability	46	14.65 (12.35)	39.38 (19.69)	25.33 (20.76)
Behav/Emo Disability	3	21 (22.91)	38.67 (12.50)	17.67 (11.02)
Without Disabilities	2,462	22.85 (12.54)	47.68 (19.21)	24.83 (18.74)
P3 (2nd)				
Learning Disability	433	17.69 (12.35)	36.28 (15.97)	19.88 (20.76)
Physical Disability	50	16.02 (13.46)	28.98 (17.02)	16.30 (12.64)
Behav/Emo Disability	8	19.13 (14.91)	26.33 (19.08)	9.38 (10.72)
Without Disabilities	1,596	23.16 (11.63)	43.44 (15.18)	20.27 (13.86)
P4 (3rd)				
Learning Disability	365	22.55 (12.22)	34.56 (16.44)	12.01 (12.72)
Physical Disability	97	17.73 (10.67)	27.10 (15.88)	9.64 (11.58)
Behav/Emo Disability	11	20.36 (8.37)	32.09 (10.84)	11.73 (7.14)
Without Disabilities	1,348	25.45 (11.68)	39.41 (15.96)	13.96 (12.47)

Table 15 shows that students with disabilities who received RTA intervention made gains in achievement during this evaluation year. Students who are categorized under “learning disability,” the largest group of students with disabilities, made gains of 12.01 to 22.76 NCE. However, on average, they gained slightly less than the students without disabilities at every grade level. RTA students with physical disabilities made 9.64 to 25.33 NCE gains. Again, across all groups the younger P2 students made more gain than the upper primary RTA students. There were so few students with behavioral/emotional disabilities that the data must be interpreted with caution, but the data do show similar gains.

Discussion

The Read to Achieve intervention program has enabled 311 schools to adopt 38 different programs designed to address the needs of struggling readers in the primary grades. The diversity of intervention programs adopted is strength for schools in seeking the best match between instruction and achievement; however, the large number of programs chosen complicates the evaluation of RTA as a whole. Some programs serve only one or two grade levels, thus many schools adopt more than one program in order to meet the needs of all struggling readers in the primary grades. For the second year in a row, the RTA evaluation has shown that the most widely adopted programs have similar impact on the achievement of struggling readers.

As a whole, primary students in RTA schools are making good progress in reading; in fact, they are making unexpectedly good progress, as measured by the GRADE. Students in RTA schools who received intervention as well as those who did not receive intervention made progress of 10 to 20 NCEs over the evaluation period. RTA students gained 13.30 to 24.05 NCEs; non-RTA students gained 10.36 to 23.93 NCEs. RTA students in P3 and P4 gained more than their non-RTA counterparts.

Seventy percent of all the students who qualified for RTA in the fall by scoring below the 4th stanine on the GRADE scored above the 4th stanine in the spring. Almost three-fourths (74.1%) of the P2 students who received RTA scored above the 4th stanine after RTA intervention. However, this strong finding may be mediated by the skewed test-retest scores from the fall and spring administration of the GRADE for some grades.

Caucasian RTA students scored higher, on average, in the spring than African-American and Hispanic students at every grade level, but the differences between groups were smaller than in previous evaluations. In P3, African-American RTA students gained more on average than their counterparts, but in P4, they gained less than other groups.

The achievement gap between economically advantaged and disadvantaged RTA students persisted from last year's evaluation. RTA students from economically disadvantaged backgrounds made gains of 12.56 to 22.39 NCE, while RTA students from economically advantaged backgrounds made gains of 14.41 to 26.31 NCE.

As a group, students with disabilities who received RTA intervention made better progress in general than students with disabilities who attended RTA schools but did not receive RTA. P3 students especially made significantly greater gains. However, students with disabilities who received RTA began the year approximately 20 NCEs behind their peers with disabilities who were not selected for RTA and narrowed, but did not close, the gap in achievement between the two groups. An analysis of disaggregated disability labels indicated that students with learning disabilities made better gains than students with physical disabilities; however, both groups made at least ten NCE gains.

Recommendations

1. Evaluation data demonstrates that the Read to Achieve program helps struggling primary readers make as much or more progress than typical students at the P2, P3, and P4 grade levels. RTA should be continued and expanded so that all students who qualify for RTA services can receive them.

2. Disaggregated evaluation data show that primary students at all grade levels and within all diversity groups improve their achievement with RTA intervention, but students from economically disadvantaged and non-Caucasian backgrounds have lower achievement gains. Intervention teachers must insure that all students receive instruction that is responsive to diverse learning styles and cultural expectations.

3. The data collection and analysis process for this evaluation was laden with difficulties. In order for CCLD to perform its duties, timely, clean, and complete data sets are needed. KDE and CCLD have made a plan for ameliorating the problems and this plan needs to be monitored and implemented.

4. Given the difficulty with assessing young readers at the P1 and P2 level as well as the lack of normally distributed spring NCE scores, it may be prudent to investigate other measures that can be individually administered.

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Appendix A

Most Widely-Used Intervention Programs

Reading Recovery

Developed by Marie Clay, Reading Recovery provides a supplementary model of instruction for children who are at-risk in their second year of primary (first grade). The goals of Reading Recovery are to promote accelerated literacy learning and bring these children to the average of their classroom peers. Children from the lowest 20% of their class receive intensive one-to-one instruction for 30 minutes daily. Instruction involves a variety of reading and writing experiences within the context of the story, including phonological awareness, visual perception of letters, word recognition, phonics/decoding skills, fluency, and comprehension. Reading Recovery teachers participate in a full year of university-based training, followed by supportive, ongoing professional development at the local, regional, and national levels.

Literacy Groups

Literacy Groups provide daily small group instruction in reading and writing to first and second grade students utilizing the training, knowledge, and expertise of the Reading Recovery Program. Lessons include reading familiar books, letter and journal writing, diagnostic reading assessments, and the introduction and the reading of a new book.

Early Success/Soar to Success

Developed by Barbara Taylor, University of Minnesota, this reading intervention program's primary goal is to accelerate literacy growth for children in grades 1-4. Incorporating six components, this program is designed for small groups, usually consisting of 5-7 students, who follow a three-day routine in grades 1-2 (Early Success) and a five-day routine in grades 3-4 (Soar to Success).

Guided Reading

Guided Reading is typically an organizational structure whereby teachers lead students through the reading of a text. In successful RTA proposals, Guided Reading was typically provided to older primary students by Reading Recovery teachers. Instruction is described as daily 30-minute lessons focused on comprehension strategies such as surveying, predicting, setting a purpose for reading, applying phonics and decoding skills, visualizing, questioning, reflecting, summarizing, and applying.

SRA/Reading Mastery

This program uses the Direct Instruction approach developed by Siegfried Englemann at the University of Oregon. This model features highly interactive lessons presented to

small groups of students, grouping of students by performance level, and frequent assessment of student progress in the classroom setting. The main features of the model include a field-tested
reading, language arts, and math curricula, highly scripted instructional strategies, and extensive teacher training. The primary goal is to improve student performance so that by fifth grade, students perform at least a year and a half beyond grade level.

Early Intervention in Reading

Like Early Success/Soar to Success, this program was developed by Barbara Taylor at the University of Minnesota. Instruction consists of working with students as they read aloud, and focusing on phonemic awareness, phonics instruction, word recognition, and writing within the context of the story. Reading selections generally are quite short so that children can read the entire story. Stories and retellings of picture books are divided into four categories according to their length, and children progress through these reading materials during the school year. By late February or early March, children are reading independently and working together in pairs.

Early Reading Intervention (Scott Foresman)

This early reading intervention program requires 30 minutes a day to improve reading achievement. The program identifies at-risk children in Kindergarten and Grade 1 with a placement test. Features of the program include interactive, systematic instruction in Learning Letter Names and Sounds; Segmenting, Blending and Integrating; Word Reading; and Sentence Reading.

ELLI, the English Language & Literacy Intensive

This program was created in response to California Governor Gray Davis' focus on education and his desire to improve the literacy skills and test scores of California's schoolchildren. California State Library guidelines require that these programs involve the whole family in the learning process and that they encompass multiple goals and outcomes.

Lindamood Bell

Developed by Pat and Charles Lindamood this program focuses on intensive reading instruction. The program consists of three components; LiPS (a phoneme sequencing program), See Stars (symbol imagery for phonemic awareness, sight words, and spelling), and V/V (visualizing and verbalizing for language comprehension). The three components are administered during 30 minute sessions in small groups and one-on-one.

Breakthrough to Literacy

Developed at the University of Iowa by speech and language pathologists, the program is designed for preschool through first grade students to establish the foundations of reading in a dynamic balanced oral and print environment. Elements include interactive software, print materials for home and school, and intensive on-site professional development.

Fast ForWord

Fast ForWord is a research-based, short-term instructional intervention designed to develop the five components of reading. The program utilizes computer-based software administered by highly trained teachers during individual sessions. Sessions are flexible and the computer program is designed to monitor and record student progress.