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ABSTRACT

Three analyses were conducted for this progress report of the Reading Excellence Act as implemented in Alabama public schools. The first analysis involved third grade reading comprehension scores over the 3-year period (1999-2001). Overall, reading comprehension scores remained stable. Based on multiple criteria, schools that either failed to meet expectations or exceeded them were identified. The second analysis examined changes from second to third grade for a matched sample of students participating REA schools. For all schools, the scores were higher in second grade. This may be, in part, due to the nature of the evaluation instrument used, the Alabama Early Learning Inventory. As in the first analysis, schools that either failed to meet expectations or exceeded them were identified. The third analysis examined relationships among the scores from the kindergarten, first, and second grade assessments with Stanford Achievement Test, Level 9 scores in third grade. Results revealed strong, positive relationships between each of the second grade strands and third grade performance. (RS)

# Reading Excellence Act (REA): A Progress Report

Presented to:

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## Analysis #1
## Analysis of Third Grade Reading Comprehension (1999-2001).

Third grade SAT9 Reading Comprehension scores were examined over a three-year period (1999-2001). While the scores at each year are attributed to different students, this analysis provides some basis for understanding the changes in achievement at the third grade level in participating REA schools. For the purposes of this examination, schools were categorized into four groups: 1) Non-REA schools, 2) REA schools implementing tutorial assistance (TA), 3) REA Schools implementing local reading improvement (LRI), 4) REA schools employing both TA and LRI. Descriptive information for each of these four groups of schools is summarized below.

**Grade 3 Reading Comprehension - 1999-2001**

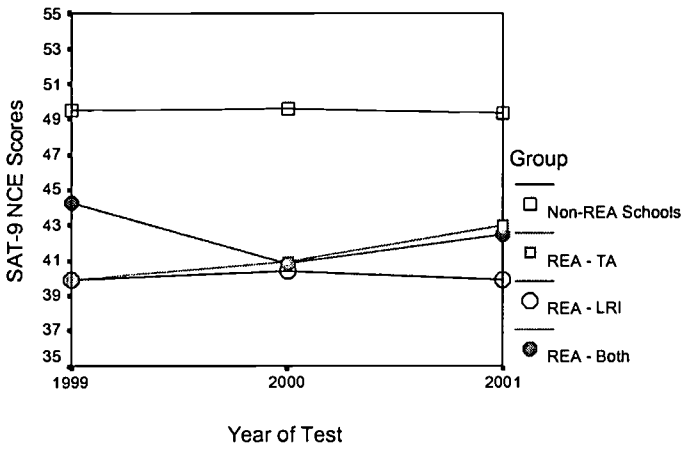
| | REATYPE | Mean | Std. Deviation | Number of Schools |
|---|---|---|---|---|
| Reading Comp 1999 | Non-REA Schools | 49.5039 | 7.6422 | 668 |
| | Tutorial Assistance | 39.9013 | 3.1498 | 16 |
| | Local Reading Improvement | 39.9324 | 4.3625 | 39 |
| | Both TA and LRI | 44.2520 | 5.9123 | 7 |
| | Total | 48.7317 | 7.8430 | 730 |
| Reading Comp 2000 | Non-REA Schools | 49.5813 | 7.5027 | 668 |
| | Tutorial Assistance | 40.9260 | 4.8604 | 16 |
| | Local Reading Improvement | 40.4242 | 4.7016 | 39 |
| | Both TA and LRI | 40.8136 | 5.8047 | 7 |
| | Total | 48.8183 | 7.7268 | 730 |
| Reading Comp 2001 | Non-REA Schools | 49.3073 | 7.9993 | 668 |
| | Tutorial Assistance | 42.9933 | 3.7819 | 16 |
| | Local Reading Improvement | 39.8988 | 4.8385 | 39 |
| | Both TA and LRI | 42.5105 | 2.8534 | 7 |
| | Total | 48.6011 | 8.1045 | 730 |

Overall, 3rd grade reading comprehension scores remained stable from 1999-2001, increasing slightly from 48.73 in 1999 to 48.82 in 2000 before falling dropping to 48.60 in 2001. The profile of non-REA schools is very similar, increasing from 1999-2000 and falling slightly in 2001. The profiles of REA schools from 1999-2001, however, are different.

While REA schools implementing tutorial assistance have gradually increased their third grade reading comprehension each year (39.90 in 1999 to 42.99 in 2001), the other two groups have experienced different trends from 1999-2001. REA-LRI schools experienced an increase from 1999 to 2000 (39.93 to 40.42) before returning to their 1999 level this past year (39.90). The seven schools using both TA and LRI declined from 44.25 in 1999 to 40.81 in 2000 before an increase to 42.51 this past year. The profiles for each group of schools are displayed in the Figure below.

Third Grade Reading Comprehension

1999-2001



## Regression Analysis (Using Grade 3 Cohorts)

Regression analysis was used to identify academic and demographic predictors of third-grade SAT-9 Reading comprehension. The two academic variables used were the previous two years SAT-9 scores. The demographic predictors included percentages of: 1) students receiving a free/reduced lunch, 2) minority students, 3) special education students, 4) female students, and 5) attendance. These regressions were used to predict school performance based on their academic and demographic situation and determine the extent to which their actual performance met these predicted expectations. A school's departure from expected performance was then used as one criterion for judging the success of the school over the past year.

| Summary of Regression Analysis<br>Third Grade Reading Comprehension | |
|---|---|
| | |
| **Academic Predictors** | **R= .845, $R^2$ = .714. p < .001** |
| RC 2000<br>RC 1999 | .492 ***<br>.392 *** |
| **Demographic Predictors** | **R= .780, $R^2$ = .608. p < .001** |
| Percent Free/reduced lunch<br>Percent Minority<br>Attendance Rate<br>Percent Female<br>Percent Special Education | -.484 ***<br>-.365 ***<br>.157 ***<br>.053 *<br>-.002 |
| * p < .05, ** p < .01, *** p < .001 | |

The overall relationship between the previous two years of SAT9 scores was very high (R= .845). The most recent reading comprehension performance (RC2000) was identified as the most contributing predictor of current performance. The relationship between demographic variables and current SAT9 scores in reading comprehension was slightly lower, but very strong (R= .780). Among the demographic variables considered, percent of free/reduced lunch and percent of minority students related negatively to reading comprehension while attendance rate and percent of female students correlated positively.

**Selection of Outlier Schools (Using Grade 3 Cohorts)**

Based on multiple criteria, schools were identified as outliers in that they either failed to meet expectations or exceeded them. The following criteria were used to select outlier schools.

1. Change in SAT9 Reading Comprehension Scores from 2000 to 2001, using grade 3 performance. To judge this criterion, gains from year to year were transformed to Z scores (standardized values) so that such gains or losses could be viewed in reference to the average gain or loss for all third grades.
2. Comparison of current performance (RC 2001) to what is expected based on the past two years scores. To judge this criterion, 2001 scores were predicted form the school's academic history to arrive at an expected level of performance. The difference between each school's actual performance and what would be expected was standardized (using Z scores) so that the discrepancy could be examined more easily.
3. Comparison of current performance (RC 2001) to what would be expected given their demographic situation. This criterion was judged much like #2 above, using an expected performance based on demographic predictors.

Based on the analysis of matched-cases school-wide performance using the above criteria, I would select the following REA schools as positive and negative outliers

**Positive Outliers:**

The following schools experienced the largest increases in third-grade reading comprehension over the past year. These schools have also exceeded demographic and academic expectations in 2001.

F. S. Erwin Elementary (Wilcox County)
Shiloh Elementary (Dallas County)
North Sumter Junior High (Sumter County)
Elyton Elementary (Birmingham City)
Glendale (Mobile County)
Gaston (Birmingham City)
Peter Joe Hamilton (Mobile County)
Oscar W. Adams (Gadsden City)

**Negative Outliers**

The following schools experienced the largest declines in third-grade reading comprehension over the past year. These schools have also fallen short of demographic and academic expectations in 2001.

Lisman Jr. High (Choctaw County)
Monroe Sr. High (Monroe County)
Abrams Elementary (Bessesmer City)
Southern Choctaw Elementary (Choctaw County)
Dunbar Elementary (Montgomery County)
Alberta Elementary (Tuscaloosa City)

## Analysis #2
## Analysis of Change from Grade 2 to Grade 3 in REA Schools

The second analysis examined changes from grades 2 to 3 for a matched sample of students in participating REA schools. The SAT9 is administered in grades 3 through 11. Therefore, to assess change from grade 2 to grade 3, an alternative assessment was used for grade 2. The Alabama Early Learning Inventory (AELI) is a state test designed for Kindergarten through grade 2. . The AELI was administered in the falls of 1999 and 2000.

The Kindergarten tests includes sections pertaining to phonemic awareness, concepts of print, expressive language and graphophonemic knowledge. The first grade tests also include sections regarding phonemic awareness, concepts of print and graphophonemic knowledge. In addition, the grade 1 test examines passage comprehension and conventions of writing. Finally, the second grade test examines the areas of passage comprehension and oral reading

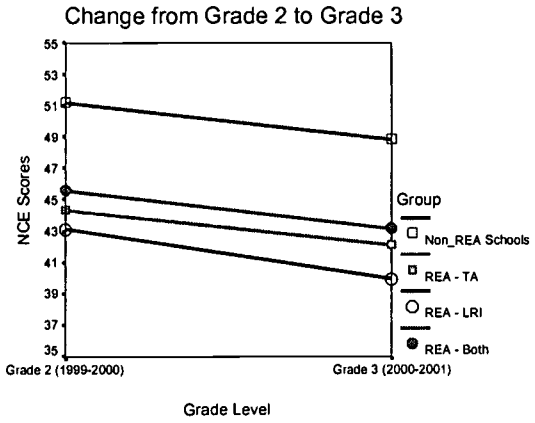
Passage comprehension is most closely aligned with reading comprehension, which is a primary focus of the SAT9 in third grade. Therefore, the subtest of passage comprehension subtest, administered to 2nd graders in the fall of 1999, was used as a baseline measure. These second graders became third graders in the fall of 2000, the first year of participation in REA and completed the SAT subtest of reading comprehension in the spring of 2001.

For the purposes of this analysis, schools were categorized into four groups: 1) Non-REA schools, 2) REA schools implementing tutorial assistance (TA), 3) REA Schools implementing local reading improvement (LRI), 4) REA schools employing both TA and LRI. Descriptive information for each of these four groups of schools is summarized below.

**Change from Grade 2 to Grade 3**

| | | Mean | Std. Deviation | Number of Schools |
|---|---|---|---|---|
| Passage Comp - Grade 2 | Non-REA Schools | 51.1567 | 7.7109 | 701 |
| | Tutioral Assistance | 44.3044 | 4.0130 | 16 |
| | Local Reading Improvement | 43.1239 | 5.4888 | 40 |
| | Both | 45.5563 | 6.9363 | 7 |
| | Total | 50.5413 | 7.8141 | 764 |
| Reading Comp - Grade 3 | Non-REA Schools | 48.8091 | 7.9682 | 701 |
| | Tutioral Assistance | 42.1089 | 3.2587 | 16 |
| | Local Reading Improvement | 39.9548 | 5.0827 | 40 |
| | Both | 43.1441 | 4.3315 | 7 |
| | Total | 48.1533 | 8.0524 | 764 |

For all schools, the scores were higher in second grade. This may be, in part, due to the nature of the test. The second grade assessment norms are based solely on the state's performance while the SAT9 is normed using a national sample. The profiles of each group are similar, as displayed in the figure below.



## Regression Analysis (Using Grade 3 Cohorts)

Regression analysis was used to identify academic and demographic predictors of third-grade SAT-9 Reading comprehension. The academic variable used were the previous year's performance in Grade 2 – Passage Comprehension and Oral Reading. The demographic predictors included percentages of: 1) students receiving a free/reduced lunch, 2) minority students, 3) special education students, 4) female students, and 5) attendance. These regressions were used to predict school performance based on their academic and demographic situation and determine the extent to which their actual performance met these predicted expectations. A school's departure from expected performance was then used as one criterion for judging the success of the school over the past year.

| Summary of Regression Analysis<br>Third Grade Reading Comprehension | |
|---|---|
| | |
| **Academic Predictors** | **R= .793, $R^2$ = .629. p < .001** |
| Grade 2 Passage Comp<br>Grade 2 – Oral Reading | .663 ***<br>.160 *** |
| **Demographic Predictors** | **R= .770, $R^2$ = .593. p < .001** |
| Percent Free/reduced lunch<br>Percent Minority<br>Attendance Rate<br>Percent Female<br>Percent Special Education | -.487 ***<br>-.354 ***<br>.165 ***<br>.032<br>-.017 |
| * p < .05, ** p < .01, *** p < .001 | |

The overall relationship between the previous two years of SAT9 scores was very high (R= .793) with Grade 2 – Passage Comprehension identified as the most contributing predictor of current performance. The relationship between demographic variables and current SAT9 scores in reading comprehension was slightly lower, but very strong (R= .770). Among the demographic variables considered, percent of free/reduced lunch and percent of minority students related negatively to reading comprehension while attendance rate correlated positively.

**Selection of Outlier Schools (Using Grade 3 Cohorts)**

Based on multiple criteria, schools were identified as outliers in that they either failed to meet expectations or exceeded them. The following criteria were used to select outlier schools.

1. Change from Grade 2 to Grade 3, using matched cases. To judge this criterion, gains were transformed to Z scores (standardized values) so that such gains or losses could be viewed in reference to the average gain or loss for all schools.
2. Comparison of third grade performance (RC 2001) to what is expected based on the grade2 performance. To judge this criterion, 2001 scores were predicted form the school's academic history to arrive at an expected level of performance. The difference between each school's actual performance and what would be expected was standardized (using Z scores) so that the discrepancy could be examined more easily.
3. Comparison of current performance (RC 2001) to what would be expected given their demographic situation. This criterion was judged much like #2 above, using an expected performance based on demographic predictors.

Based on the analysis of matched-cases school-wide performance using the above criteria, I would select the following REA schools as positive and negative outliers

**Positive Outliers:**

The following schools experienced the largest increases from 2nd to 3rd grade over the past year. These schools have also exceeded demographic and academic expectations.

Gaston (Birmingham City)
W.E. Striplin (Gadsden City)
W.H. Brazier (Mobile County)
F. S. Erwin Elementary (Wilcox County)
Oscar W. Adams (Gadsden City)
Martha Thomas (Mobile County)
Monroe Sr. High (Monroe County)

**Negative Outliers**

The following schools experienced the largest declines from 2nd to 3rd grade over the past year. These schools have also fallen short of demographic and academic expectations.

York West End Jr. High (Sumter County)
Livingston Jr. High (Sumter County)
Fruitdale High (Washington County)
Southlawn Elementary ((Montgomery County)
Donald Elementary (Fairfield County)
Monroeville Elementary (Monroe County)
Stillman Heights (Tuscaloosa City)
Alberta Elementary (Tuscaloosa City)
T.S. Morris (Montgomery County)

The following schools were identified as positive outliers using both analysis procedures:

Gaston (Birmingham City)
F. S. Erwin Elementary (Wilcox County)
Oscar W. Adams (Gadsden City)

The following school was identified as negative outliers using both analysis procedures.

Alberta Elementary (Tuscaloosa City)

**Analysis # 3**
**Relationship Between K,1,2 Assessments and SAT Scores**

The third analysis examined relationships among the scores from the K,1, and 2 assessments with SAT scores in third grade.

Relationships Between Grade 2 and Grade 3

The bivariate relationships between each of the second grade strand scores and third grade SAT scores are summarized in the table below. Each of the strands and SAT scores are described below:

Grade 2
Strand 1 – Passage Comprehension, Strand 2 – Oral Reading, Strand 3 – Total

Grade 3
Reading Comprehension, Vocabulary, Total Reading

**Correlations Between Grade 2 (Strands 1,2,3) and Grade 3 SAT Reading Scores**

| | | STRAND1 | STRAND2 | STRAND3 |
|---|---|---|---|---|
| Read Comp | Pearson Correlation | .616** | .461** | .612** |
| | Sig. (2-tailed) | .000 | .000 | .000 |
| | N | 44267 | 44299 | 44088 |
| Vocab | Pearson Correlation | .587** | .474** | .600** |
| | Sig. (2-tailed) | .000 | .000 | .000 |
| | N | 44267 | 44299 | 44088 |
| Total Read | Pearson Correlation | .630** | .484** | .632** |
| | Sig. (2-tailed) | .000 | .000 | .000 |
| | N | 44267 | 44299 | 44088 |

**. Correlation is significant at the 0.01 level (2-tailed).

These results reveal strong, positive relationships between ach of the 2nd grade strands and third grade performance. Whereas strand one, passage comprehension, correlates more strongly with reading comprehension (r=.616), stand two, oral reading, resulted in a stronger relationship with third grade vocabulary (r=.474).

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