



# RESEARCH BRIEF

NANCY CARRILLO

AUGUST 2006

---

## A STUDY OF THE IMPACT OF LITERACY PRACTICES IN STUDENT OUTCOMES IN ELEMENTARY SCHOOLS

---

### BACKGROUND

APS Elementary Schools use a variety of instructional approaches and materials to teach reading and Language Arts to all students. Many rely on a leveled bookroom as a key component of the Balanced Literacy approach. Others use one or more of several published basal core reading programs. Some schools use both. APS is interested in determining the effect, if any, of different literacy instructional practices or materials on student outcomes as the 2008-2009 Language Arts text adoption nears.

APS Teaching and Learning Systems analyzed 2004-2005 elementary school AYP (Adequate Yearly Progress) reading results. AYP is based on the percentage of proficient students on the New Mexico Standards Based Assessment (NMSBA). This analysis examined whether schools using a published basal core reading program met AYP standards more or less often than those with a Balanced Literacy approach. The analysis showed the same percentage of schools in each group met AYP, 75% (Vigil-Scott & Bretting-Miller, 2006).<sup>1</sup>

The current study adds to this research by considering a slightly different outcome measure—whether a school exceeded, met, or failed to meet *target* proficiency levels on the 2004-2005 NMSBA. This study holds constant certain student demographic variables known to impact assessment outcomes. The demographic variables included in the study are stability, income, English language learners, and ethnicity. This study examines the possibility that demographic variables may have masked real effects due to instructional practices or materials.

### RESEARCH QUESTION

*Controlling for student demographics, are schools using published literacy instructional materials more likely to reach reading proficiency targets than other schools?*

### METHODS

RDA ran cross tabulations between schools' academic performance on the Language Arts portion of the New Mexico Standards Based Assessment (NMSBA) and their practices of literacy instruction. The unit of analysis is the school.

RDA obtained self-reported literacy instructional practices from Teaching and Learning Systems as well as self-reported information collected by The New Mexico Public Education Department

---

<sup>1</sup> Vigil-Scott, Darlene & Mary Bretting-Miller. 2006. *Elementary Literacy Leader Program Data*. Albuquerque Public Schools publication.

for its 2005-2006 Full Day Kindergarten Report. RDA classified the responses of 59 APS elementary schools, while insufficient information excluded 24 schools from analysis. Twenty-seven schools (46%) used a bookroom with no published basal core program. Twenty-three schools (39%) used a published core basal program without a bookroom. The remaining nine schools (15%) used both a leveled bookroom and a published core basal program. The most commonly used published core basal reading programs were Harcourt Brace (11), Houghton-Mifflin (9), and Scott Foresman (7). Two schools each used Macmillan McGraw-Hill, SRA Open Court and Success For All.

For the outcome measure, RDA used ratings described in the APS Spring 2006 Statistical Peers for Benchmarking Report. This report used four student-related demographic variables to determine an “expected” proficiency rate for each school. The four demographic variables were: ethnicity (% student body from underperforming ethnicities), income (% of student body in the Free/Reduced Price Meals program), stability (% of student enrolled at the end of the year that were enrolled at the beginning of the year) and non-native language speakers (% of student body that were English Language Learners). Overall, just over half of schools, 56%, had percentages of proficient students that met expectations. About one quarter, 24% had percentages of proficient students below prediction, and 30% had percentages of proficient students above prediction.

## RESULTS

RDA used cross-tabulations to examine the relationship between instructional reading program and outcomes. Table 1 is a description of results. No clear pattern emerges. A Fisher’s exact test indicates no relationship when all programs are included ( $p=.17$ ).

Table 1: 2004-05 SBA Outcomes by Instructional Reading Program/Materials

	Bookroom Only	Harcourt Brace	Houghton-Mifflin	Macmillan McGraw-Hill	SRA Open Court	Scott Foresman	Success for All	Total
Below Expectation	22%	46%	12%	0%	50%	0%	50%	24%
Met Expectation	52%	9%	50%	100%	50%	57%	50%	56%
Exceeded Expectation	26%	46%	38%	0%	0%	43%	0%	30%
N	27	11	8	2	2	7	2	59

RDA combined and compared instructional practices and materials in a number of ways. While statistically significant differences exist in some cases, no program was found to be better than any other. Notably, as seen in Table 1, most schools using Harcourt Brace either had a proficiency level below expectation or they exceeded expectation (the extreme categories). This bimodal distribution differs markedly from the normal distribution of all other instructional practice/material groups, in which most schools met expectations—the middle category. These results may suggest that the impact of Harcourt Brace on academic outcomes is particularly dependent on its implementation, or they may be a peculiarity of small cell sizes.

RDA compared Balanced Literacy/Bookroom only schools to those using a published core program. As seen in Table 2, percentages in each outcome category are similar; the two groups do not differ significantly ( $p=.71$ ).

Table 2: 2004-05 SBA Outcomes, Comparison of Schools With and Without a Published Basal Core Reading Program

	Leveled Bookroom Only	Published Core Program
Below Expectation	22%	25%
Met Expectation	52%	41%
Exceeded Expectation	26%	34%
N	27	32

RDA also examined whether schools that used both a published core program *and* a leveled bookroom differed from those with only one approach. Table 3 below indicates that the percentage of schools in the Below Expectation category differs substantially among schools with a published core program. The percentage among schools with both a published core program and a leveled bookroom is only 11% compared to 30% of schools with only a published core program and 22% among schools with a leveled bookroom only. However, sample sizes are quite small, and this difference is likely due to chance ( $p=.69$ ).

Table 3: 2004-05 SBA Outcomes: Schools With Core Program, Leveled Bookroom & Both

	Leveled Bookroom Only	Published Core Program Only	Both Published Core Program and Leveled Bookroom
Below Expectation	22%	30%	11%
Met Expectation	52%	35%	56%
Exceeded Expectation	26%	35%	33%
N	27	23	9

## CONCLUSIONS

Like the TLS analysis described above, this study finds no indication that one literacy instructional practice or program is better than another, even when holding student demographic factors constant. Thus far, evidence suggests that schools can use a variety of instructional programs and materials to achieve good academic outcomes – but clearly some schools do better than others, even when student demographics are taken into account. Many other factors cannot

be ignored regarding achievement outcomes, such as program fidelity, adequate professional development, and satisfactory leadership.

## **LIMITATIONS**

The self-reported literacy approach data have several problems. Nearly three in ten schools (24 or 29%) did not provide complete or accurate information about their program. Schools may use different approaches for different grades, but this information was not collected. Supplemental and intervention programs remain unknown. This analysis covers only a single year. The study lacks a measure of implementation fidelity (to the program plan). Finally, the aggregated design of this study is not as strong as one using individual students as the unit of analysis.

## **RECOMMENDATIONS**

Because of the many limitations to this analysis, RDA continues to study this question. Indeed, members of Research, Development and Accountability; Teaching and Learning Systems; Language and Cultural Equity; and Special Education recently worked together to create a Reading Program Inventory. This on-line inventory, targeted towards instructional coaches, requests information about schools' literacy instruction practices. The inventory addresses many of the weaknesses of the current study by requesting grade-specific information, information about supplemental and intervention instruction practices as well as practices of special education teachers specifically. The inventory requests information for four school years and obtains some measures of program implementation. Because the information is gathered by grade-level, practices can be matched to individual students. In this way, further studies can draw upon students as the unit of analysis rather than schools, yielding more precise program descriptions and first level indicators of program implementation.