

# *EVALUATION REPORT*

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## **THE ALBUQUERQUE READS PROGRAM: A THREE-SITE ANALYSIS**

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### *Introduction*

The Albuquerque Reads program is a partnership between the Greater Albuquerque Chamber of Commerce (GACC) and Albuquerque Public Schools (APS) designed to reinforce reading skills among all kindergarten students. The program started in APS in 2003-04 at Bel Air Elementary and expanded in 2004-2005 school year to two more schools. Currently three schools participate in Albuquerque Reads: Atrisco, Bel-Air, and Wherry Elementaries.

Albuquerque Reads takes place three mornings a week for one hour. During the first thirty minutes, half of the students receive one-to-one tutoring by volunteers from the business community recruited by the GACC and APS while the other half receives thirty minutes of small group instruction from their teachers. The class then rotates for the second thirty minutes.

*Small group instruction:* Each participating classroom has a reduced pupil-teacher ratio while the tutoring is taking place. With approximately eight to ten students at a time, teachers and their educational assistants provide guided reading instruction. With such a small group, teachers are better able to focus on the differentiated needs of their students.

*Tutoring:* Each school has a 0.5 FTE site coordinator who is a Title One reading teacher. This coordinator provides volunteer tutors with three hours of initial training, follow-up training at the beginning of the spring semester and as needed. The coordinator also meets with the tutors each day approximately ten minutes before tutoring begins to review the activities for the day. Each site also provides a 0.5 FTE educational assistant to support the program with the organization and rotation of program materials and the logistics of tutors and students. Both positions are paid out of Title I funds.

Volunteers may choose to tutor up to one day every week; about half of volunteers do so. Others may join a team and volunteer every two to five weeks. To the extent possible, volunteers meet with the same students each time they tutor.

The tutor structure consists of three 10-minute task card activities for reading, writing and skill development. The activities were designed, and occasionally revised, by the Bel-Air Program Design Team in 2003, consisting of two Title I reading certified teachers and the principal who is also a reading specialist. All tasks cards are aligned to the state kindergarten standards and the district Kindergarten Developmental Progress Record (KDPR) test questions. After tutoring, volunteers provide feedback to teachers through comment forms. Each tutor works with two students during their one-hour tutoring assignment, independently tutoring each student for thirty minutes.

*School and District Support*: Each school site coordinator, educational assistant and one kindergarten teacher are required to attend monthly program implementation and support meeting with the instructional manager for elementary curriculum. Principals attend three meetings a year to review program requirements and implementation requirements. District personnel meet with GACC monthly to exchange feedback. Notably, the program requires a strong and consistent recruitment focus. Each school site requires approximately 150 to 200 tutors, and a district coordinator has noted that recruitment and retention of tutors is an extensive process each year.

## ***Research Questions***

District leaders may be considering expanding or otherwise modifying Albuquerque Reads. To help with their decision, this evaluation report seeks to answer:

*How much does ‘Albuquerque Reads’ cost?*

*How well does the program ‘Albuquerque Reads’ improve reading ability among kindergarteners?*

## ***Method***

We obtained information for this report from two sources. District personnel provided description and cost information. We also collected Fall 2006 and Spring 2007 KDPR assessment information from Albuquerque Reads and comparison schools. The ‘Albuquerque Reads’ group consists of all kindergarten students at Atrisco, Wherry, and Bel-Air Elementaries. The comparison group consists of all kindergarten students in all other schools in the same Statistical Peer Group. Atrisco and Wherry are both members of Statistical Peer Group 2, while Bel-Air is a member of Statistical Peer Group 3.<sup>1</sup> The study is limited to students who stayed in the same school from the 20<sup>th</sup> day to the 160<sup>th</sup> day.

## ***Results***

### ***Cost***

As a collaborative project, the costs for this project, approximately \$309,000 a year, are divided between GACC and APS. GACC commits one full-time staff member plus supplies for the recruitment, retention, and recognition of tutors. Largely through Title I funds, APS pays for the partial salaries of the site coordinators, educational assistants and district personnel, as well as materials. For the three participating schools, APS pays approximately \$208,670 or approximately \$69,557 per school. During the 2006-07 SY, approximately 176 students attended one of the three Albuquerque Reads schools for the entire school year. The cost per student

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<sup>1</sup> Statistical Peers for Benchmarking groups schools with similar student compositions based on each school’s percentage of students participating in the Free and Reduced Price Meals program, percentage of students that are English Language Learners, and percentage of students that are a member of an underperforming minority ethnic group. The analysis places elementary schools into six groups of eight to seventeen schools. Dunavin, R. (2006). “Statistical Peers for Benchmarking NMSBA 2005,” Albuquerque Public Schools. [www.rda.aps.edu/RDA/Documents/Publications/05\\_06/Stat\\_Peers\\_Benchmarking.pdf](http://www.rda.aps.edu/RDA/Documents/Publications/05_06/Stat_Peers_Benchmarking.pdf).

completing the entire Albuquerque Reads program is about \$1,186. An additional 60 students attended one of the three schools for part of the school year. When all participating students are considered, the cost per student is about \$884. APS funding sources and costs are described in Table 1.<sup>2</sup>

**Table 1: APS Costs for Albuquerque Reads**

School Site <sup>3</sup>	District Cost
0.5 FTE Site Coordinator Teacher x 3	\$91,500
0.5 FTE Educational Assistant x 3	\$21,000
School and Community Partnerships	
Data Clerk	\$29,506
0.5 FTE Data Clerk	\$11,915
0.2 FTE Manager	\$12,296
0.1 FTE Director	\$6,903
Support materials	\$10,550
Title I	
Recurring materials costs x 3	\$10,500
Teaching and Learning Systems	
0.2 FTE Instruction Manager	\$12,000
0.1 FTE Secretary	\$2,500
<b>TOTAL</b>	<b>\$208,670</b>

Cost information for other initiatives is not available with the partial exception of Kindergarten Plus. In the 2005-2006 school year, the \$100,000 grant from the New Mexico Public Education Department was used to fund Kindergarten Plus in four classrooms at a cost of approximately \$1,675 per student participating in the entire program. No APS costs, such as associated school or district costs, were included in this analysis. Assessment data suggest Kindergarten Plus improves kindergarteners’ math, reading, and social skills at least in the short term.<sup>4</sup>

**Academic Achievement**

Table 2 shows the average gain in KDPR scores for Albuquerque Reads and comparison group students in English and Spanish.<sup>5</sup> In both English and Spanish, these results suggest students in all three Albuquerque Reads schools gained more points than their peers in other schools.

Among the fourteen Statistical Peer Group 2 schools in which at least ten students were assessed in English, Wherry students gained more points, 27, than any other school, followed by Whittier, La Luz, Pajarito, and Carlos Rey. Atrisco was the 6<sup>th</sup>-highest performing school, with an average

<sup>2</sup> This figure does not include the original start-up program materials costs of \$12,000 per site, which were originally paid for by GACC. The district has start-up program materials for two additional schools. Should more than two new schools implement Albuquerque Reads, the costs for start up materials would have to be added.

<sup>3</sup> Title I provided \$20,000 to two Albuquerque Reads schools to assist with school salaries.

<sup>4</sup> Carrillo, N. (2007). “The Impact of Kindergarten Plus: Summative and Formative Evaluation 2003-2006,” Albuquerque Public Schools. [www.rda.aps.edu/RDA/Documents/Publications/06\\_07/KPlus%20Eval\\_03\\_06.pdf](http://www.rda.aps.edu/RDA/Documents/Publications/06_07/KPlus%20Eval_03_06.pdf)

<sup>5</sup> For the purposes of this report, language is determined by the language of the spring administration of KDPR. Nearly all students in this sample, 97%, were assessed in the same language for both time periods. Just 2% of students were assessed first in English and then in Spanish, while 1% were assessed first in Spanish, then in English.

gain of 22 points. On the whole, comparison group students gained on average 20 points. (See Appendix A for a list of each school’s average gain.)

**Table 2: Average Gain in KDPR Reading Scores from Fall to Spring 2006-2007, Albuquerque Reads and Comparison Schools**

Language	Number of students	Location	Average gain in KDPR reading scores (standard deviations in parentheses)
English	33	Atrisco	22.03 (5.81)
	62	Wherry	27.08 (7.05)
	805	Statistical Peers 2 Comparison Group	19.91 (7.15)
	51	Bel-Air	23.24 (7.96)
	1,183	Statistical Peers 3 Comparison Group	20.81 (7.05)
Spanish	11	Atrisco	26.27 (4.69)
	19	Wherry	26.80 (6.29)
	191	Statistical Peers 2 Comparison Group	19.60 (8.72)
	0	Bel-Air	n/a
	109	Statistical Peers 3 Comparison Group	22.17 (9.01)

Similarly, among the twenty Statistical Peer Group 3 schools in which at least ten students were assessed in English, Kirtland students gained on average the most points, followed by Apache and McCollum. Bel-Air was the 4<sup>th</sup>-highest performing school, with an average gain of 23 points. On the whole, comparison group students gained on average 21 points.

In Spanish, the results are a little stronger. Among the eleven Statistical Peer Group 2 schools in which at least ten students were assessed in Spanish, La Luz students gained on average the most points. Wherry and Atrisco were the 2<sup>nd</sup> and 3<sup>rd</sup>-highest performing schools with average gains of 27 and 26 points, respectively. On the whole, comparison group students gained an average of 21 points.

Since English and Spanish scores are reasonably similar, in Table 3 we have combined these results and performed t-tests to determine whether the differences in gains are attributable to chance.<sup>6</sup> These results suggest they are not. With both Statistical Peer Groups 2 and 3, students in ABQ Reads schools gained statistically significantly more points than their peers. Combining the Statistical Peer Groups, ABQ Reads students gained nearly 4.5 or 22% more points compared to their peers.

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<sup>6</sup> Virtually the same results are obtained by repeating these t-tests but separating students by language.

**Table 3: T-tests of Average Gains in KDPR Reading Scores from Fall to Spring 2006-2007, Albuquerque Reads and Comparison Schools :**

Statistical Peer Group	Number of schools and students		Average change in KDPR, fall to spring		Difference	T
	ABQ Reads	Comparison Group	ABQ Reads	Comparison Group		
2	2 schools 125 students	12 schools 996 students	25.63	19.85	5.76	8.24***
3	1 school 51 students	20 schools 1,292 students	23.24	20.93	2.31	2.22*
Combined	3 schools 176 students	32 schools 2,288 students	24.94	20.46	4.48	7.79***

\*p<.05, \*\*p<.01, \*\*\*p<.001

However, a more robust statistical test will include other factors that may influence gains in scores. In particular, demographic variables such as gender, ethnicity, poverty status, non-English speaker, and special education status influence test scores, and may in some cases influence change in test scores, as we are predicting here. While it is not expected that either Statistical Peer Group membership or the language of assessment will be important to changes in KDPR, we have controlled for these variables as well.

In Table 4, we use OLS regression to assess the influence of Albuquerque Reads on improving KDPR reading scores while controlling for gender, ethnicity, poverty status, special education status, peer group, and being assessed in Spanish.<sup>7</sup> Importantly, we have clustered this analysis by school location. Clustering by location helps to control for variations that might occur between schools that are not accounted for in the model.

Note the strong influence of Albuquerque Reads. This analysis suggests that after controlling for statistical peer group membership, language of assessment, and demographic variables, students in Albuquerque Reads schools gain almost five points more on the KDPR Reading assessment from the Fall to Spring compared to students in other schools. Not surprisingly, only one control factor influences change in KDPR scores. Special education students gained statistically significantly fewer points than non-special education students.

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<sup>7</sup> Gender is a dummy variable where female is coded 1. Ethnicity is a dummy variable where underperforming minorities (Blacks, Hispanics and Native Americans) are coded 1, Asians and Whites are coded 0. Poverty status is a dummy variable in which students participating in Free or Reduced Lunch Program are coded 1. Special education status is a dummy variable; students receiving special education services are coded 1. Statistical Peer Group 3 is a dummy variable in which schools in Group 3 are coded 1. Students assessed in Spanish are coded 1 in the dummy variable 'Assessed in Spanish'.

**Table 4: Impact of Albuquerque Reads on Gains in KDPR**

	Predicting Gain in KDPR Reading Score
N	2,464
R <sup>2</sup>	.04
ABQ Reads	4.71** (1.57)
Gender	.07 (.27)
Ethnicity	.76 (.46)
Poverty Status	-.25 (.69)
Special Education Status	-3.14*** (.51)
Statistical Peer Group 3	1.02 (1.27)
Assessed in Spanish	.34 (1.38)

Standard errors in parentheses.

\*p<.05, \*\*p<.01, \*\*\*p<.001

### ***Limits to this Research***

At least five important limitations exist to this research.

1. Albuquerque Reads differs from typical reading instruction in several ways, including more one-to-one instruction, more community involvement, more teacher-led small group instruction, and more district support. This analysis cannot distinguish which of these differences or combination of differences might be responsible for the success of Albuquerque Reads.
2. This analysis is limited to a single cohort, with only three participating schools, and a single, short-term outcome measure. Thus, the generalizability of the findings is weak. Additional research in other settings with similar findings would strengthen our confidence in these results.
3. Other schools might employ “competing” reading strategies that focus on other grades or particular subgroups of students, such as struggling students. Because the single outcome in this study is measured at the end of the kindergarten year and does not differentiate between groups of students, the success of other schools’ “competing” programs may not be apparent.
4. Albuquerque Reads may be implemented with more fidelity than other schools’ reading initiatives. While this analysis does not speak to the issue of fidelity, both the fact that Albuquerque Reads is in its fourth year, the ongoing training, and the attention paid to the program by district leaders and community members imply that fidelity is probably high. Many schools’ reading initiatives (e.g. Wilson, Avenues, and K-3 Plus) have been implemented more recently and often with less district support.

5. While cost information is reported for Albuquerque Reads and one other reading initiative, this analysis lacks the comprehensiveness, controlled measures, and comparison of costs and effect sizes to other approaches provided in a cost-benefit analysis. Cost information is illustrative but by itself cannot establish the relative value of Albuquerque Reads.

## ***Conclusion***

Currently, Albuquerque Reads costs APS an additional \$209,000 or about \$70,000 per school. Should additional schools be added, the per-school cost will depend in large part on what changes, if any, occur in district support. As an illustration, if three schools were added to the program and district support was unchanged, the cost per school for Albuquerque Reads would be approximately \$57,100 per school and increase to \$344,000 total. At the other extreme, if three schools were added to the program and district support doubled, the cost per school for Albuquerque Reads would remain at about \$70,000 per school and increase to \$419,000 total.

KDPR assessment information provides evidence that Albuquerque Reads helps kindergarten students' reading skills to a significant degree. Overall, participants gained nearly five points or 22% more than their peers from the Fall to the Spring KDPR administrations, a substantial improvement. These results are consistent across language and statistical peer group. While these results are quite promising, important limitations to the research should be kept in mind. Chiefly, the generalizability of the study is not strong. Under other circumstances, for example if additional schools should attenuate district personnel attention, fidelity and thus assessment gains may lessen. Additionally, equally successful, alternative programs in other schools might not appear as such here because of the single short-term outcome measure used.

Thus, formative and summative evaluation should certainly continue, particularly if decision-makers wish to expand or otherwise modify the program. Evaluation work combining qualitative and quantitative information could provide details that could be used for program improvement; and stronger research designs, including those examining long-term outcome measures and administered in different settings, would increase our confidence in these encouraging findings.

## Appendix A

School	English		Spanish	
	Avg. gain	# students	Avg. gain	# students
<b>Statistical Peer Group 2</b>				
<i>Wherry</i>	<b>27.1</b>	<b>62</b>	<b>26.8</b>	<b>19</b>
Whittier	25.3	66	n/a	0
La Luz	23.5	49	32.4	14
Pajarito	23.4	43	n/a	0
Carlos Rey	23.0	111	24.4	22
<i>Atrisco</i>	<b>22.0</b>	<b>33</b>	<b>26.3</b>	<b>11</b>
Valle Vista	20.3	35	21.3	23
Cochiti	19.3	57	17.4	10
Mary Ann Binford	19.3	117	23.8	12
Lowell	18.6	60	16.2	13
Hawthorne	18.5	48	13.8	37
Reginald Chavez	18.0	41	16.9	13
Edward Gonzales	16.2	146	18.2	39
Duranes	14.7	32	n/a	8
<b>Total</b>	<b>20.5</b>	<b>900</b>	<b>20.6</b>	<b>221</b>
<b>Statistical Peer Group 3</b>				
Kirtland	30.4	64	n/a	0
Apache	27.8	65	n/a	0
McCollum	23.7	55	n/a	0
<i>Bel-Air</i>	<b>23.2</b>	<b>51</b>	<b>n/a</b>	<b>0</b>
MacArthur	22.9	33	n/a	0
Manzano Mesa	22.2	119	n/a	0
Tomasita	21.7	60	n/a	0
Alameda	21.7	41	n/a	3
Susie Rayos Marmon	21.5	81	n/a	0
Painted Sky	20.2	101	31.6	21
Montezuma	20.2	46	28.2	17
Eubank	19.6	54	n/a	1
Mission Avenue	19.6	40	n/a	2
Chaparral	19.5	118	n/a	1
Los Ranchos	18.8	61	n/a	0
Griegos	18.2	43	n/a	0
Matheson Park	17.5	36	n/a	1
Lew Wallace	17.3	35	n/a	0
Hodgin	15.8	80	n/a	2
Mark Twain	13.6	51	n/a	0
Longfellow	n/a	0	18.1	61
<b>Total</b>	<b>20.9</b>	<b>1,234</b>	<b>22.2</b>	<b>109</b>