

**YEAR ONE REPORT:  
EVALUATION STUDY OF THE WRITING ROAD TO READING  
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Arizona State University conducted the first of a four-year quasi-experimental study for Spalding in the 2006-2007 school year. The study involved 51 teachers and 1,213 kindergarten students in the final study sample. In this first year, the study was conducted with kindergarten students in 5 treatment and 6 control schools. Schools/classrooms were matched on socioeconomic status of students, class size, student race/ethnicity, and the school's geographic location. These measures were taken to ensure that the treatment classrooms/schools did not differ significantly in their structure or composition from the control schools.

The purpose of this evaluation was to study the effectiveness of *The Writing Road to Reading* program in helping children attain critical reading skills. *The Spalding Method* is a total language arts approach because it provides explicit, sequential, multisensory instruction in spelling (including phonics and handwriting), writing, and listening/reading comprehension. The study assessed teachers' implementation of the materials and measured the effect of the program on student achievement. Researchers also examined comparisons between children taught using Spalding's *Writing Road to Reading* and children taught using other, more traditional reading programs. This report presents the study results to date.

**METHOD**

The study evaluated teachers' implementation of Spalding's *Writing Road To Reading* using a uniform quantitative instrument. Researchers collected data through classroom observations using the observation protocol. For the student measures, researchers employed the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) as the primary measure to assess changes in students' reading skills during the 2006-2007 school year. This study was conducted in eleven diverse Arizona schools with a total of 1,213 participating kindergarten students. Table 1 on the next page lists the study schools, number of classes and number of students.

The experimental and the control groups are roughly equal in size. Students were comparable across conditions, although the experimental group has a higher percentage of English Language Learner (ELL) students who tend to experience more difficulties than the native speakers of English in developing their reading skills. On the other hand, the control group has a slightly higher percentage of children in the Free or Reduced Lunch program (F/RL), which indicates a lower socio-economic background. A little more than half of the students (52%) were male, and approximately half (48%) were female. Across grades and treatment conditions, 53% of students were Hispanic, 35% White, 5% Asian, 3% Black, and 1% Native American. Of all students, 45% qualified for free- or reduced-priced lunch, while 33% were categorized by their district as an English Language Learner.

Table 1: *Schools Included in the Analysis*

Group	Name of School	# K Classes	# Students
Experimental	Alhambra	5	101
	Bret Tarver	6	148
	CTA-Liberty	5	124
	Gallego	4	101
	Valley Academy	6	123
<b>Total</b>	<b>5</b>	<b>26</b>	<b>597</b>
Control	#1 – M	4	116
	#2 – N	6	131
	#3 – O	4	102
	#4 – P	4	101
	#5 – Q	5	128
	#6 - R	2	38
<b>Total</b>	<b>6</b>	<b>25</b>	<b>616</b>

### PROGRAM IMPLEMENTATION & RESULTS

According to the researchers' observation protocols, at least 60% of treatment teachers implemented the program with high fidelity and 30% implemented it with moderate fidelity. The final observation summary showed that in the area of program philosophy, all teachers made children's physical and mental well-being a primary concern, and they provided direct sequential instruction. In general, some teachers still needed to 1) use the Collins Model of Instruction in all lessons, 2) maintain a well-organized and disciplined classroom so all children have the opportunity to learn, and 3) provide consistent multisensory instruction. Additional suggestions for some teachers were that they have high expectations for all children, ask higher-level thinking questions, e.g., move from knowledge to application questions, and demonstrate the connection between the spelling, writing, and reading objectives, e.g., "Now that we have entered spelling words, let's see how to use them in sentences." Or, "Now that you have practiced phonograms, let's see how well you can use them as you read today."

In terms of student performance results, the Spalding K students had consistently higher *mean* values on all DIBELS areas, which indicates that Spalding has been more effective than all the other methods used in the control schools in teaching those reading skills, in spite of the fact that the experimental/Spalding group included a higher percentage of ELL students. Students in both groups improved over time; however, in every category the treatment group students had higher mean scores than control group students by an average of nearly seven points. Excluding Winter ISF, in each DIBELS testing area, treatment students significantly outperformed their control counterparts.

An analysis of covariance (ANCOVA) was also conducted to examine whether students who participated in the program experienced significant learning gains, controlling for their initial

scores. Three of the tested areas (PSF, LNF, and NWF) were initially tested in the winter and again in the spring. An ANCOVA was used to control for the initial scores for the treatment and for the control group. The covariate was the first test in the areas during the winter, 2007. The adjusted year end scores were analyzed to compare the treatment and control group after each group improved over time. ANCOVA results revealed a significant difference in PSF and NWF scores among the two groups. The adjusted means for the treatment group (M = 46.17, 46.56) versus the control group (M = 40.29, 35.98) was significantly higher ( $p < .01$ ). The adjusted means for the two groups were not significantly different from each other on the LNF items.

This is a significant achievement because, according to DIBELS decision rules, at the end of kindergarten it is important for students to have established phonemic awareness of Phoneme Segmentation Fluency (PSF) and to be at low risk on Nonsense Word Fluency (NWF). Strong performance in these two subtests increases the students' odds of achieving subsequent literacy goals. According to their research findings, for most students who achieved 35 on PSF and 25 on NWF, the odds of achieving first grade reading outcomes were 68 percent to 92 percent. The Spalding students' statistically higher and significant performance in these two areas bodes well for their continued reading success.

### **SUMMARY**

Preliminary results of this one-year study provide strong evidence of the efficacy of *The Writing Road to Reading* in building kindergarten early literacy skills. After less than one year of implementation, children in treatment classrooms performed better than children in control classrooms on all DIBELS measures. These findings demonstrate the power of Spalding's *Writing Road to Reading* in providing the explicit, targeted instruction required to build a strong foundation for ongoing reading development.

These preliminary findings suggest that use of *The Writing Road to Reading* curriculum was effective in enhancing performance on critical early literacy skills among emergent readers particularly in the area of phoneme segmentation and nonsense word fluency. Phonemic awareness is critical to learning to read English (Wagner, Torgesen, & Rashotte, 1994).

According to the report *Reading First, A Closer Look at the Five Essential Components of Effective Reading Instruction*:

Phonemic awareness can also be used to predict how well children will learn to read. Researchers were able to identify who would learn to read more easily and who would have difficulty by measuring the extent to which children had developed phonemic awareness (Share, Jorm, Maclean, & Matthews, 1984). More importantly, a number of studies have shown that teaching phonemic awareness to young children significantly increases their later reading achievement (Cunningham, 1989; Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998; Lundberg, Frost, & Peterson, 1988).

Table 1: Comparative Mean Scores of Spalding and Control Kindergarten Students on the DIBELS (Fall 2006, Winter 2007, Spring, 2007)

		Experimental	Control	Difference
Fall, 2006	Initial Sound	10.80*	7.32	+3.48
	Letter Name	15.81*	10.79	+5.02
	Word Use	12.01*	3.23	+8.78
Winter, 2007	Initial Sound	18.99	17.37	+1.62
	Letter Name	32.75*	28.44	+4.31
	Phoneme Segmentation	27.77*	20.21	+7.56
	Nonsense Word	26.61*	20.28	+6.33
	Word Use	22.89*	9.51	+13.38
Spring, 2007	Letter Name	47.97**	44.39	+3.58
	Phoneme Segmentation	47.68*	39.62	+8.06
	Nonsense Word	46.17*	35.36	+10.81
	Word Use	39.91	26.92	+12.99

\*p<.001

\*\*p<.005

Table 2  
Kindergarten Students' Mean Post-Scores on DIBELS

		Mean Test Scores		
		Treatment (n = 538)	Control (n = 529)	DIBELS End of Kindergarten Low risk score
Letter Name Fluency (LNF)	Spring test	47.97	44.39	40
Phoneme Segmentation Fluency (PSF)	Spring test	47.68	39.62	35
Nonsense Word Fluency (NWF)	Spring test	46.17	35.36	25