

The
effectiveness
of the
Avenues™
Reading
Instructional
Program for
Use with
Struggling
Readers

2006-
2007

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Avenues Effectiveness Study 2006-2007: Struggling Readers

Executive Summary

During the 2004-2005 school year, SEG conducted a study at grades 2-5 to evaluate the effectiveness of the Avenues instructional program for use with struggling readers. The Avenues program is a core program designed primarily for English Language Learners (ELLs) is published by Hampton-Brown. The goal of the study was to evaluate the effectiveness of the Avenues reading instructional program for use with struggling readers. Three hundred and sixty one students from 25 classrooms in 6 different schools participated in the study. Using a quasi-experimental pre-post, experimental-control group design, the study compared the growth in reading proficiency between students who received reading instruction using the Avenues program (Experimental Group) and a comparable group of students who received reading instruction using other reading programs (Control Group).

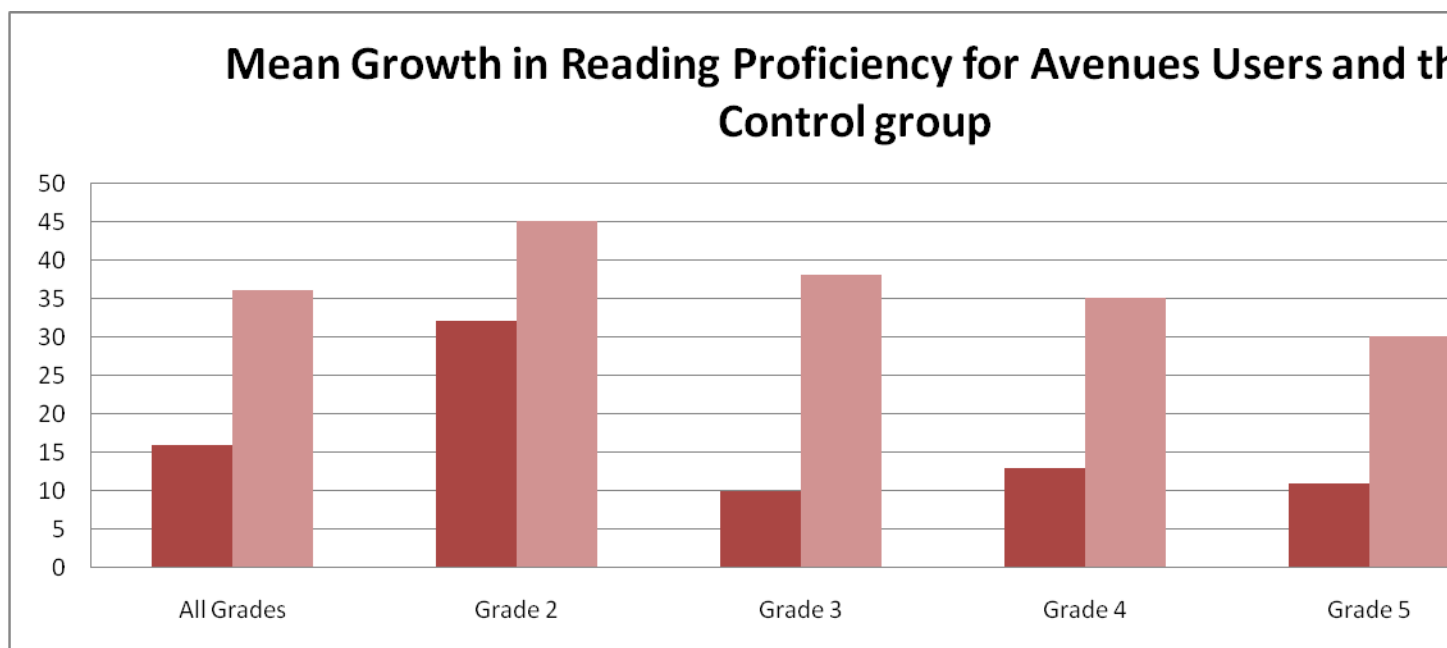
Students' growth in reading proficiency was measured by comparing their proficiency as measured by the Stanford Diagnostic Reading Test (SDRT) at the beginning and end of the year after receiving instruction. Students in both the Experimental and Control Groups were administered a pre-test (SDRT) at the beginning of the school year. Students in the Experimental Group then received instruction using the Avenues program, while those in the Control Group received reading instruction using other programs. At the end of the school year, students in both the Experimental and Control Groups were administered a post test (SDRT) to see the level of growth in reading proficiency. The results were then compared statistically.

Students receiving instruction using Avenues increased their reading proficiency significantly more than those in the Control Group. This was true for the overall group (Grades 2-5) as well as separately for Grades 2-4. About 9% of the variation in growth in reading proficiency can be accounted for by Avenues use. In Grade 4, Avenues use accounted for about 27% of the variation in growth in reading proficiency.

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The (unadjusted) growth in reading proficiency for those receiving Avenues instruction and the Control Group are shown in table x below. The results are presented on the SDRT scale; a gain of approximately 6 points on the SDRT scale is equivalent to about 1%.

Table X



Additional analysis of substantially struggling readers revealed that the Avenues program is even more effective for these substantially struggling readers than their less challenged counterparts. About 15% of the variation in post-test reading scores for these substantially struggling readers was the result of the use of Avenues.

These results support the effectiveness of instruction using the Avenues reading program for use with struggling readers. Students using Avenues achieve significantly greater increases in reading proficiency than students receiving instruction using other reading programs. Moreover, the results show that those with substantial reading deficits may benefit substantially from instruction using the Avenues program.

The effectiveness of the Avenues™ Reading Instructional Program for Use with Struggling Readers

While this study clearly demonstrates the effectiveness of the Avenues program for use with struggling readers, additional research is needed to confirm these findings and to validate these findings in other school environments and with a range of struggling reader populations.

The Effectiveness of the Avenues™ Reading Instructional Program for Use With Struggling Readers

Avenues Program Overview

[Insert 3-5 pages from last year's study?]

Rationale [we need to build this in a paragraph]

The Avenues Program is a research based, standards-based program with specialized strategies. These strategies include: xxxx. Because the Avenues program is standards based , well grounded in research and provides specialized strategies it is likely to be more effective in improving student reading proficiency. Moreover, it is likely to be more effective than traditional practices.

Why struggling readers?

Effectiveness Study Goals and Overview

This report describes a study conducted to evaluate the effectiveness of the Avenues instructional program for use with struggling readers. The study, conducted during the 2006-2007 school year, compares the growth in reading proficiency of students in grades 2-5 who received instruction using Avenues (Experimental Group) to those using a variety of alternative instructional reading programs (Control Group). The study compared the growth in reading proficiency attained by struggling readers in the Control and Experimental Groups as measured by the Stanford Diagnostic Reading Test (SDRT) in the Fall (Pre test) and Spring (Post test).

The purpose of this study was to investigate the following questions:

The effectiveness of the Avenues™ Reading Instructional Program for Use with Struggling Readers

1. Do struggling readers in grades 2 through 5 receiving Avenues instruction show larger gains in reading proficiency than a comparable group of students receiving alternative reading instruction?
2. For which grades (2-5) do students receiving Avenues instruction show the largest gains in reading proficiency compared to a students receiving alternative reading instruction?
3. Do students showing substantial deficits in reading proficiency benefit more from Avenues instruction than those students with less substantial deficits in reading proficiency?

Sample

Student Sample

Participants in the study were drawn from **six** schools in a **large Midwestern school district**. Three hundred and sixty one students enrolled in **25** classes designed for struggling readers participated in the study. The Experimental Group included 201 students, while the Control Group included 160 students. Table X shows the number of students in each grade and in the Experimental and Control Groups.

Struggling Readers were defined as **xxxx**.

Students in both the Experimental and Control Groups received at least 30 minutes of reading instruction daily. Teachers in the Experimental Group reported an average of 55 minutes of Avenues instruction daily occurring, 4 days a week. Teachers in the Control Group reported teaching reading an average of 78 minutes per day, 5 days a week.

Table X
Number of Participants by Grade and Group

Grade	N
Grade 2	61
Grade 3	93
Grade 4	91

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Grade 5	116
Total (All Grades)	361
Group	
Control Group	160
Experimental Group	201
Total (All Groups)	361

It is very important in a study comparing student growth to establish that the Control Group and Experimental Group are similar in terms of ability (in this case reading proficiency) and with respect to other background characteristics that may confound the results. If the Control Group and the Experimental Group are not similar, then we can not be sure that any effects we find are due to the treatment (in this case Avenues Use) or are the result of some differences in the individuals that existed before we conducted the study.

SEG compared the characteristics of both the Control and Experimental Groups. The results show that there were no differences in gender or ethnicity between the Control and Experimental Groups and no significant differences between the groups' initial reading proficiency ($t=-.013;p>.05$). The initial proficiency levels as measured by the SDRDT Pre Test data are shown in table x below.

Table X
Initial Reading Proficiency (Fall Pretest SDRT Results)

Group	N	Mean SDRT Pre Test	Standard Deviation SDRT Pre Test
Control Group	160	618	42
Experimental Group	201	624	78
Total (All Groups)	361	621	65

Teacher Characteristics

All of the teachers reported having at least 2-4 years of teaching experience. About two thirds of the teachers in the Experimental Group reported having 5 or more years of teaching experience and

about one fifth of the teachers in the Control Group reported having 5 or more years of teaching experience.

Description of the Pretest and Posttest

The Stanford Reading Diagnostic Test (SDRT; fourth edition, 1996) was used to measure reading proficiency for this study. The SDRT is a widely used Reading diagnostic test measuring Phonetic Analysis, Vocabulary, Comprehension and (in Grade 5) Scanning (SDRT Technical manual; Harcourt, 1996).

The SDRT measures reading on a vertical scale ranging from 300-900. The scaled scores represent equal units; differences in scaled scores at any point in the scale represent the same amount of reading proficiency. This allows for an accurate comparison of changes over time. The scale is equivalent across forms allowing for an accurate comparison across grade levels; a score at one grade level means that same thing at another grade level.

Reliability and Validity

The reliability of the SDRT is quite high; the KR-20 reliability coefficients for the forms range from .95 to .96 (Harcourt, 1996). Several validity studies conducted for the SDRT have found strong evidence for the validity of the SDRT test scores; for example, content expert review found strong alignment with important reading skills and strong relationships with other measures of reading ability were found. For a more complete discussion of the SDRT reliability and validity, readers are referred to the SDRT Technical Manual (Harcourt 1996)

Study Design

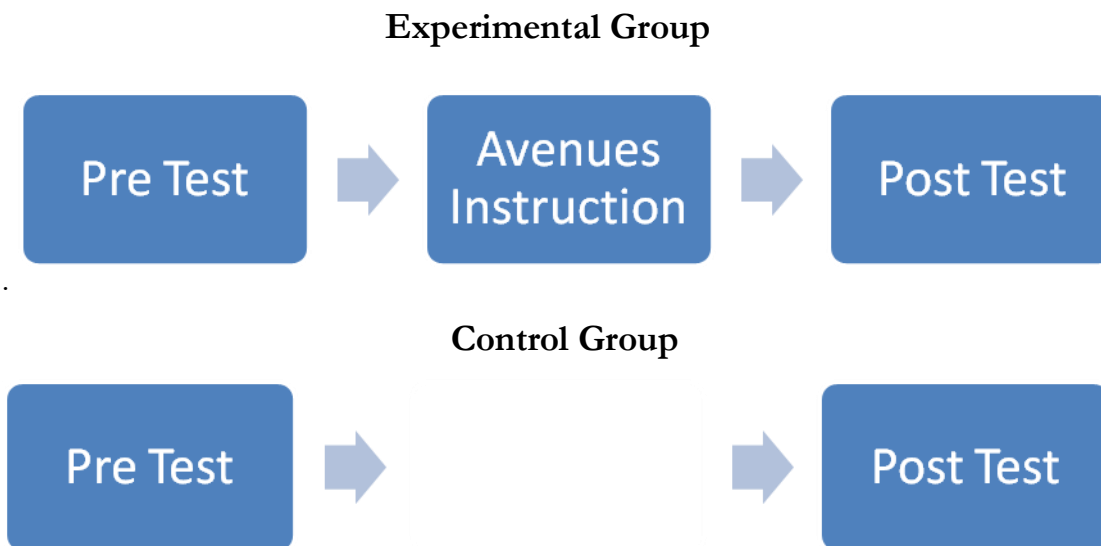
The goal of the effectiveness study was to compare the growth in reading proficiency for struggling readers who received Avenues instruction to struggling readers who did not receive Avenues instruction. Students' growth in reading proficiency was measured by comparing their proficiency at the beginning and end of the year after receiving instruction. Students in both the Experimental and Control Groups were administered a pre-test (SDRT) in October of 2006. Students then received instruction from October 2006 through May of 2007. Students in the Experimental Group received instruction using the Avenues program, while those in the Control Group received instruction using

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alternative reading instruction. In June 2007 students in both the Experimental and Control Groups were administered a post test (SDRT). The results were then compared statistically (see below).

The Study employed a pre-post, experimental- control group design. Since the students were not randomly assigned to the groups, this is considered a quasi-experimental design. This design is illustrated in Chart X below.

Chart X
Study Design



Data Collection

Teachers participating in the study were provided with SDRT test booklets and administration manuals for their grade level in October 2006. The teachers administered the SDRT in October

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2006 according to the administration instructions provided. Students in grades 2 and 3 recorded their answers by circling their answer choices directly in the booklet. Students in grades 4 and 5 recorded their responses on scannable answer documents provided with the SDRT. The completed test booklets were then returned for processing. The answer sheets for grades 4 and 5 were scanned and entered into a data base; the responses for grades 2 and 3 were transcribed and entered into the data base. Any questions that the students did not answer were scored as incorrect. Students answering fewer than 5 questions were removed from the analysis. All data was reviewed and checked for accuracy before scoring and analysis.

In May 2007, following approximately 7 months of instruction, the teachers were again provided with SDRT test booklets and administration manuals for their grade. The teachers administered the SDRT in June of 2007 according to the administration instructions provided. The tests were then processed as described for the pre test.

Findings

Descriptive Statistics

In order to characterize the overall sample and participants in the Experimental and Control Groups, the number of participants in each study group and at each grade level was calculated. Similarly, the average (Mean) scores and standard deviations for both the pre and post tests were computed for each study group and grade level. The sample sizes for the growth analysis are somewhat smaller, since only those students with both a pre test and post test score were included in the analysis; if a student was not present for the pre or post test, the student was excluded from the growth analysis. The descriptive statistics for each grade and the Study Groups are shown in Table X below.

Table X
Descriptive Statistics

Group	Pre Test N	Mean Pre Test	Standard Deviation	Post Test N	Mean Post Test	Standard Deviation
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The effectiveness of the Avenues™ Reading Instructional Program for Use with Struggling Readers

		SDRT	Pre Test SDRT		SDRT	Post Test SDRT
By Group						
Control Group	160	618	42	139	634	33
Avenue Users Group	201	624	78	203	645	40
By Grade						
Grade 2	61	573	34	78	613	29
Grade 3	93	612	40	90	639	36
Grade 4	91	624	37	88	647	35
Grade 5	116	652	89	87	661	36
Total Group	361	621	65	343	640	38

Measuring Growth

The growth in Reading Proficiency for the Control and Experimental Groups was compared using a statistical procedure known as Analysis of Covariance or ANCOVA. ANCOVA provides an accurate way to compare growth over time controlling for student differences in proficiency at the beginning of the study. To be sure that any differences in growth we find are the result of Avenues Use and not merely the result of differences that existed when the study was started, we need to control for any differences in proficiency between the Control and Experimental Group that may exist at the beginning of the study.

ANCOVA is a statistical approach that holds the initial proficiency level of the students constant to allow a more accurate comparison of growth that occurred since the beginning of the study.

ANCOVA is able to compare differences as if the two groups were identically matched in initial reading proficiency. While no procedure can completely eliminate differences that may exist at the outset of a study, this procedure is widely recognized as an effective way to control for differences.

Only students for whom matched Pre test and Post Test results were available were included in the growth analysis. The analysis looked only at those students that had taken the SDRT measure of reading proficiency in both the Spring and the Fall. Students who left the class during the school year or who joined the class during the school year were not included in the growth comparisons.

Question 1: Overall Effectiveness of Avenues for Struggling Readers

Growth Comparison for All Grades

The reading proficiency scores (SDRT) for those students in classes using the Avenues program were compared to the reading proficiency scores (SDRT) of those students in classes who used alternative reading programs. Analysis of Covariance (ANCOVA) was used to evaluate the difference in reading scores (dependent variable) between the Avenues Users and the control group (independent variable) controlling for the initial reading proficiency levels of the students (covariate).

The results show a significant difference in reading proficiency between the Avenues users and the control group ($df=1/270$; $F=24.8$; $p<.05$) when initial reading proficiency is controlled for. The average reading score for students in the Experimental Group (Mean =652) was significantly greater than the average reading score achieved by students in the Control group (Mean=634). Avenues Use accounted for approximately 9% of the variation in Reading Scores (Eta squared=.085). This means that that nearly 10% of the growth in reading proficiency can be explained by whether or not teachers and their students used the Avenues Program. The results are summarized in Table x and Table x below.

Table x
Analysis of Variance Table
All Grades
Comparison of Control Group and Avenues Users Group Reading Post Test Scores for All Grades

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Part
Corrected Model	167099.350	2	83549.675	94.089	.000	.
Intercept	398170.046	1	398170.046	448.395	.000	.
Reading Pre Test	145029.094	1	145029.094	163.323	.000	.
Group	21985.985	1	21985.985	24.759	.000	.
Error	237093.404	267	887.990			
Total	112473503.2	270				
Corrected Total	404192.753	269				

Table X

Descriptive Statistics Comparison of Control Group and Experimental Group Post Test Scores

Group	N	Mean SDRT	Standard Deviation SDRT
Control Group	117	634	34
Avenues Users Group	153	652	40
Total Group	270	644	39

Question 2: Effectiveness of Avenues for Struggling Readers at Specific Grade Levels

The Reading Proficiency Gains as a result of using Avenues was compared at individual grade levels as well. The Grade 2,3 and 4 results revealed significantly greater growth in reading proficiency for those in the Experimental Group consistent with the results seen for the All Grades analysis. The results for Grade 5 showed higher mean growth in reading proficiency for the Experimental Group, but the differences observed were not statistically significant.

Growth Comparison for Grade 2

The reading proficiency scores (SDRT) for those students in Grade 2 classes using the Avenues program were compared to the reading proficiency scores (SDRT) for those students in Grade 2 classes who used alternative reading programs. Analysis of Covariance (ANCOVA) was used to evaluate the difference in reading scores (dependent variable) between the Experimental and the Control Groups (independent variable) controlling for the initial reading proficiency levels of the students (covariate).

The results show a significant difference in reading proficiency between the Experimental and the Control groups ($df=1/52$; $F=5.1$; $p<.05$) when initial reading proficiency is controlled for. The average reading score for students in the Experimental Group (Mean =620) was significantly greater

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than the average reading score achieved by students in the Control Group (Mean=605). Avenues use accounted for approximately 9% of the variation in Reading Scores (Eta squared=.094). This means that that nearly 10% of the growth in reading proficiency can be explained by whether or not teachers and their students used the Avenues Program. The results are summarized in Table x and Table x below.

Table x
Analysis of Variance Table
Grade 2

Comparison of Control Group and Avenues Users Group Reading Post Test Scores Grade 2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Part
Corrected Model	27820.970	2	13910.485	31.842	.000	
Intercept	9348.296	1	9348.296	21.399	.000	
Reading Pre Test	25030.653	1	25030.653	57.297	.000	
Group	2220.155	1	2220.155	5.082	.029	
Error	21406.117	49	436.860			
Total	19644006.604	52				
Corrected Total	49227.088	51				

Table X
Grade 2

Descriptive Statistics Comparison of Control Group and Experimental Group Post Test Scores

Group	N	Mean SDRT	Standard Deviation SDRT
Control Group	20	605	39
Avenues Users Group	32	620	23
Total Group	52	614	31

Growth Comparison for Grade 3

The reading proficiency scores (SDRT) for those students in Grade 3 classes using the Avenues program were compared to the reading proficiency scores (SDRT) for those students in Grade 3 classes who used alternative reading programs. Analysis of Covariance (ANCOVA) was used to evaluate the difference in reading scores (dependent variable) between the Experimental and the Control Group (independent variable) controlling for the initial reading proficiency levels of the students (covariate).

The results show a significant difference in reading proficiency between the Avenues users and the control group ($df=1/79$ $F=20.16$; $p<.05$) when initial reading proficiency is controlled for. The average reading score for students in the Experimental Group (Mean =649) was significantly greater than the average reading score achieved by students in the Control group (Mean=630). Avenues use accounted for approximately 21% of the variation in Reading Scores (Eta squared=.21). This means that that about a fifth of the growth in reading proficiency at Grade 3 can be explained by whether or not teachers and their students used the Avenues Program. The results are summarized in Table x and Table x below.

Table x
Analysis of Variance Table
Grade 3
Comparison of Control Group and Avenues Users Group Reading Post Test Scores Grade 3

The effectiveness of the Avenues™ Reading Instructional Program for Use with Struggling Readers

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial	Sum of Squares
Corrected Model	54935.604	2	27467.802	46.492	.000		
Intercept	24636.809	1	24636.809	41.700	.000		
Reading Pre Test	47444.815	1	47444.815	80.305	.000		
Group	11907.860	1	11907.860	20.155	.000		
Error	44901.542	76	590.810				
Total	32489489.489	79					
Corrected Total	99837.146	78					

Table X
Grade 3

Descriptive Statistics Comparison of Control Group and Experimental Group Post Test Scores

Group	N	Mean SDRT	Standard Deviation SDRT
Control Group	20	630	25
Experimental Group	32	649	41
Total Group	52	614	36

Growth Comparison for Grade 4

The reading proficiency scores (SDRT) for those students in Grade 4 classes using the Avenues program were compared to the reading proficiency scores (SDRT) for those students in Grade 4 classes who used alternative reading programs. Analysis of Covariance (ANCOVA) was used to evaluate the difference in reading scores (dependent variable) between the Experimental and the Control Group (independent variable) controlling for the initial reading proficiency levels of the students (covariate).

The results show a significant difference in reading proficiency between the Avenues users and the control group ($df=1/65$ $F=22.46$; $p<.05$) when initial reading proficiency is controlled for. The average reading score for students in the Experimental Group (Mean =664) was significantly greater

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than the average reading score achieved by students in the Control group (Mean=631). Avenues use accounted for approximately 27% of the variation in Reading Scores (Eta squared=.27). This means that that about a quarter of the growth in reading proficiency at Grade 3 can be explained by whether or not teachers and their students used the Avenues Program. The results are summarized in Table x and Table x below.

Table x
Analysis of Variance Table
Grade 4
Comparison of Control Group and Avenues Users Group Reading Post Test Scores Grade 3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Par	So
Corrected Model	59629.745	2	29814.873	75.746	.000		
Intercept	5218.784	1	5218.784	13.259	.001		
Reading Pre Test	44246.972	1	44246.972	112.412	.000		
Group	8838.476	1	8838.476	22.455	.000		
Error	24404.150	62	393.615				
Total	27728522.401	65					
Corrected Total	84033.895	64					

Table X
Grade 4
Descriptive Statistics Comparison of Control Group and Experimental Group Post Test Scores

Group	N	Mean	Standard
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The effectiveness of the Avenues™ Reading Instructional Program for Use with Struggling Readers

		SDRT	Deviation SDRT
Control Group	23	631	28
Experimental Group	42	664	35
Total Group	65	652	36

Growth Comparison for Grade 5

The reading proficiency scores (SDRT) for those students in Grade 5 classes using the Avenues program were compared to the reading proficiency scores (SDRT) for those students in Grade 5 classes who used alternative reading programs. Analysis of Covariance (ANCOVA) was used to evaluate the difference in reading scores (dependent variable) between the Experimental and the Control Group (independent variable) controlling for the initial reading proficiency levels of the students (covariate).

While the means suggested that the Experimental Group showed greater growth in reading proficiency than the Control Group, the results of the ANCOVA analysis showed no significant difference ($df=1/74$ $F=2.99$; $p>.05$). This appears to be the result of the high degree of variability in the pre test scores. The results are summarized in Table x and Table x below.

Table x
Analysis of Covariance Table

The effectiveness of the Avenues™ Reading Instructional Program for Use with Struggling Readers

Grade 5

Comparison of Control Group and Avenues Users Group Reading Post Test Scores Grade 3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Par	So
Corrected Model	14982.034	2	7491.017	6.905	.002		
Intercept	376157.343	1	376157.343	346.719	.000		
Reading Pre Test	10754.029	1	10754.029	9.912	.002		
Group	3241.576	1	3241.576	2.988	.088		
Error	77028.388	71	1084.907				
Total	32611484.735	74					
Corrected Total	92010.422	73					

Table X

Grade 5

Descriptive Statistics Comparison of Control Group and Experimental Group Post Test Scores

Group	N	Mean SDRT	Standard Deviation SDRT
Control Group	37	655	29
Experimental Group	37	670	40
Total Group	74	663	36

Question 3: Effectiveness of Avenues for Substantially Struggling Readers

The third question addressed in the study looked to identify if the use of the Avenues assessment was more effective for those with substantial reading problems than those with less substantial reading problems. Substantially struggling readers were identified as those who received SDRT scores at or below the grade level median for participants in the study. This group represented the “bottom half” of those students participating in this study. This subgroup of readers were studied

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separately to determine if there were significant differences in the growth in reading proficiency between those receiving Avenues instruction and those receiving an alternative. The same analysis design was used, with the exception that only the substantially struggling readers were included in the analysis

The reading proficiency scores (SDRT) for the substantially struggling readers at all grade levels using the Avenues program were compared to the reading proficiency scores (SDRT) for those substantially struggling readers who used alternative reading programs. Again, Analysis of Covariance (ANCOVA) was used to evaluate the difference in reading scores (dependent variable) between the Experimental and the Control Group (independent variable) controlling for the initial reading proficiency levels of the students (covariate).

The results show a significant difference in reading proficiency between the Avenues users and the Control Group ($df=1/135$; $F=25.92$; $p<.05$) when initial reading proficiency is controlled for. The average reading score for students in the Experimental Group (Mean =664) was significantly greater than the average reading score achieved by students in the Control group (Mean=631). Avenues use accounted for approximately 16% of the variation in Reading Scores (Eta squared=.16). This means that that about a quarter of the growth in reading proficiency at Grade 3 can be explained by whether or not teachers and their students used the Avenues Program. This compares to the analysis done for the total group (including those who were in the substantially struggling category and those who were somewhat less challenged in their reading) where about 9% of the variation in reading scores was explained by Avenues Use. The results are summarized in Table x and Table x below.

Table x
Analysis of Covariance Table
All Grades: Struggling Readers
Comparison of Control Group and Avenues Users Group Reading Post Test Scores Grade 3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Par	Sc
Corrected Model	80481.533(a)	2	40240.766	83.126	.000		
Intercept	18081.772	1	18081.772	37.352	.000		

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Reading Pre Test	69013.406	1	69013.406	142.562	.000
Group	12548.393	1	12548.393	25.921	.000
Error	63900.223	132	484.093		
Total	52728788.529	135			
Corrected Total	144381.756	134			

Table X

All Grades: Struggling Readers

Descriptive Statistics Comparison of Control Group and Experimental Group Post Test Scores

Group	N	Mean SDRT	Standard Deviation SDRT
Control Group	56	613	26
Experimental Group	79	632	35
Total Group	135	624	33

Summary and Discussion

This study examined the effectiveness of the Avenues reading instructional program for use with struggling readers. Three hundred and sixty one students from 25 classrooms in 6 different schools participated in the study. Using a quasi-experimental pre-post, experimental-control group design, the study explored the growth in reading proficiency between students who received reading instruction using the Avenues program (Experimental Group) and a comparable group of students who received reading instruction using various alternative reading programs (Control Group). Students in the Experimental and Control groups had similar levels of reading proficiency at the outset of the study.

Students' growth in reading proficiency was measured by comparing their proficiency as measured by the Stanford Diagnostic Reading Test (SDRT) at the beginning and end of the year after receiving instruction. Students in both the Experimental and Control Groups were administered a pre-test (SDRT) in October of 2006. Between October 2006 and May 2007, students in the

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Experimental Group received instruction using the Avenues program, while those in the Control Group received alternative reading instruction. In June 2007 students in both the Experimental and Control Groups were administered a post test (SDRT). The results were then compared statistically using a statistical model known as Analysis of Covariance (ANCOVA) that provides a basis for evaluating differences between groups while controlling for initial reading ability.

Students in the Experimental Group increased their reading proficiency significantly more than those in the Control Group. This was true for the overall group (Grades 2-5) as well as separately for Grades 2-4. However, the differences observed at Grade 5 were not statistically significant. About 9% of the variation in growth in reading proficiency can be accounted for by Avenues use. In Grade 4, Avenues use accounted for about 27% of the variation in growth in reading proficiency.

Additional analysis of substantially struggling readers (those at or below the median SDRT score for their grade) revealed that the Avenues program is even more effective for these substantially struggling readers than their less challenged counterparts. About 16% of the variation in post-test reading scores for these substantially struggling readers was the result of the use of Avenues.

These results support the effectiveness of instruction using the Avenues reading program for use with struggling readers. Students using Avenues achieve significantly greater increases in reading proficiency than students receiving instruction using other reading programs. About a tenth to a quarter of the variation in reading growth was accounted for by Avenues use in the study. Moreover, the results show that those with substantial reading deficits may benefit substantially from instruction using the Avenues program.

While this study clearly demonstrates the effectiveness of the Avenues program for use with struggling readers, additional research is needed to confirm these findings and to validate these findings in other school environments and with a range of struggling reader populations.

Appendix A

Avenues Users Survey Data Summary

Table X
Years of Teaching Experience

Years of Experience	N	%
1 year of less	0	0
2-4 years	4	33
5 or more years	8	67
Total	12	

Table X
Number of Avenues Units Completed

Number of Units Completed	N	%
1	0	0
2	0	0
3	3	25
4	0	0
5	1	8
6	7	58
7	0	0
8	1	8
Total	12	

Table X

Did you teach units in order?

Teach Units in Order	N	%
Yes	9	75
No	3	25
Total	12	

Table X

Number of weeks teaching Avenues

Number of weeks teaching Avenues	N	%
1-6	0	0
7-12	4	33
13-18	1	8
19-24	2	17
25-30	4	33
31-36	1	8

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37 or more	0	0
Total	12	

Table X

Days per week teaching Avenues

Days per week teaching Avenues	N	%
1	0	0
2	0	0
3	3	25
4	3	25
5	6	50
Total	12	

Table X

Minutes per day teaching Avenues

Minutes per day teaching Avenues	N	%
Less than 30	0	0
31-45	3	25
46-60	7	58
61-75	2	17
76 or more	0	0
Total	12	

Table X

Table X

Did you use National Geographic Leveled Books ?

Use National Geographic Leveled Books	N	%
Yes	12	100
No	0	0
Total	12	

Days per week using National Geographic Leveled Books

Days per week using National Geographic Leveled Books	N	%
1	8	67
2	2	17
3	2	17
4	0	0
5	0	0
Total	12	

Table X

Did your students spend time each week using a basal in addition to Avenues?

Use Basal	N	%
Yes	3	33
No	9	67
Total	12	

Table X

Did your students spend time each week using any other supplementals?

Use Other Supplementals	N	%
Yes	10	83
No	2	17
Total	12	