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ABSTRACT

The study was undertaken to determine whether this particular melding of two independently successful programs, Project Read and Guided Reading, could complement each other as intervention strategies in helping at-risk students develop literacy skills. Subjects were 11 first-grade students identified as "at-risk" of learning to read by their previous year's teachers. All were in the same first grade, inclusive classroom. Initial scores on Clay's Observational Survey (1993) placed all students below the fourth stanine on four tests of literacy skills: writing vocabulary, sentence dictation, word recognition, and text level comprehension. The results from the post-intervention assessments indicate student gains are significant ($p < .001$) in all four areas assessed. In addition, students have been observed using Project Read strategies, such as "pounding out" words or "fingerspelling" sounds; these have appeared to be especially useful for several students who may eventually be placed in a learning disabilities class. End-of-year assessment results appear to indicate that using both Guided Reading and Project Read with at-risk readers in a first grade inclusion class is an effective effort at improving students' literacy skills. Contains 12 references and 6 tables of data. (Author/RS)

Running head: TWO METHODS

A Tale of Two Methods: Melding Project Read and Guided Reading to Improve At-Risk Students' Literacy Skills

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Abstract

The study was undertaken to determine whether this particular melding of two independently successful programs, Project Read and Guided Reading, could complement each other as intervention strategies in helping at-risk students develop literacy skills. Subjects (N=11) were first-grade students identified as "at-risk" of learning to read by their previous year's teachers. All were in the same first grade, inclusive classroom. Initial scores on Clay's Observational Survey (1993) placed all students below the fourth stanine on four tests of literacy skills: writing vocabulary, sentence dictation, word recognition, and text level comprehension . The results from the post-intervention assessments indicate student gains are significant ($p < .001$) in all four areas assessed. In addition, students have been observed using Project Read strategies, such as "pounding out" words or "fingerspelling" sounds; these have appeared to be especially useful for several students who may eventually be placed in a learning disabilities class. End-of-year assessment results appear to indicate that using both Guided Reading and Project Read with at-risk readers in a first grade inclusion class is an effective effort at improving students' literacy skills.

Introduction

As a Title I remedial reading teacher in an inner-ring suburban school district, the lead investigator has provided reading instruction for at-risk students in grades two, three, and four. Because of a recent state mandate, the Fourth Grade Guarantee, which requires all students demonstrate acceptable progress (what that means has not been clarified as of the writing of this paper) on the fourth grade reading proficiency test before being promoted to fifth grade, she has begun working on literacy skills with at-risk first graders. The general purpose of this paper is to evaluate the effectiveness of the intervention strategies employed with these students in attempting to raise their levels of performance in seven literacy areas (Clay, 1993) to the average performance levels of non-at-risk students.

Perspective

Reading difficulty is typically reflected in inaccurate and slow decoding of text, as well as inaccurate word recognition. A deficit in phonological processing, especially in students with language-based disabilities, often is the major impediment impacting children's efforts to learn to read (Lyon, 1996). Orton (1973) indicated that the most powerful interventions include direct instruction in sound-symbol relationships using multisensory approaches. In addition, recent brain research (Shaywitz, 1996) on learning-disabled children, primarily those with dyslexia, indicate areas of the brain where language systems function have a hierarchical system composed of lower and higher components related to learning to read. The lower component is composed of the phonological module while the upper components are composed of semantic, syntax, and discourse modules. Students having difficulty reading, including those with dyslexia, are unable to rapidly apply phonological principles to segment sounds and, thus, to decode words. In males the locus of the phonological processing is in the left inferior frontal gyrus; in females, it resides in both left and right inferior frontal gyruses. A multisensory approach can be used to introduce and reinforce phonological principles by using not only the language area of the brain but the sensory cortex to improve recall of phonological information and speed of recognition.

Project Read and Guided Reading

Project Read (Enfield, 1988) is a systematic, concept-based, multisensory approach to teaching phonemic awareness. It was developed to teach decoding and encoding skills in classroom contexts with at-risk and learning disabled students, primarily. In 1969, Victoria Greene, a special education teacher in the Bloomington (Minnesota) schools, began teaching classroom teachers using modifications of the Gillingham-Stillman (1956) system. The system is based on two principles or concepts: (1) there are intrinsic physiological differences in some children which inhibit them from learning through a traditional approach to reading instruction; and (2) that children learn differently. Three identifiable principles of Project Read instruction indicate that those students having difficulty learning to read learn best when provided with direct instruction, a systematic curriculum based on the logical sequence of our language, and the need for multisensory experience with language. Students benefit from feeling and hearing sound-symbol connections. They learn new concepts by using sand trays and sky writing where sounds and symbols are "locked in" for purposes of decoding and encoding.

Guided Reading (Fountas & Pinnell, 1996), on the other hand, is a program supporting children's early reading based upon Reading Recovery (Clay, 1979) techniques and procedures. Guided Reading provides children with opportunities to develop as individual readers while participating in small groups. Children are placed in flexible instructional groupings based on specific, individual needs and taught strategic problem-solving strategies to enable them to read increasingly difficult texts. Children move among flexible groups based on their uses of reading strategies and their accuracy in using problem-solving techniques. Texts are leveled so that students can read material

on their instructional level. As children's automaticity in strategy use and their reading proficiency increase, students read more complex material. Teachers maintain running records which document students' uses of strategies for making meaning and utilizing visual, syntactic, and semantic cues. Children respond to their reading of texts by discussing story elements, writing in journals, or responding to specific teacher-generated questions.

Each program has its proponents. A literature search, however, revealed no efforts to combine Project Read and Guided Reading in a more holistic approach to literacy development. Clay (1985) has made it clear that the great majority, 80-90% of students in her estimation, do not need the types of structures and procedures that Reading Recovery provides. Nor would the typical first grader need instructional modifications of these methods. Yet, other combinations of methods, based upon Reading Recovery principles, have been successfully implemented in schools with students having difficulty developing competent literacy skills (Hiebert, 1999). This recent study supports implementing various methodologies for beginning readers whose tasks and texts are different from more advanced readers. The current study, therefore, was undertaken in order to determine whether this particular melding of two independently successful programs could complement each other as intervention strategies in helping at-risk students develop literacy skills.

Methodology

Sample

Subjects (N=11) were first-grade students identified as "at-risk" of learning to read by their previous year's teachers. These recommendation were based on informal classroom assessments of these students' developing literacy skills. All students were identified as weak in letter identification, word recognition, and sound/symbol identification at the end of their kindergarten year. All identified subjects were placed in the same first grade, inclusive classroom so that the Title I reading teacher could work with them. In September of their first grade year, these students were given literacy assessments (see Table 1) using Clay's Observational Survey of Early Literacy Achievement (1993). Results placed students below the fourth stanine on most of seven tests of literacy skills.

Instrumentation and Data Analysis

Using Clay's Observational Survey of Early Literacy Achievement (1993), students were tested in September on seven indicators of literacy: print orientation, letter identification, letter-sound correspondence, writing vocabulary, word identification, sentence dictation, and text level. An accompanying chart allows investigators to translate raw scores on this instrument into stanines. In an effort to control for maturation, performance on instruments in Spring is based upon the actual performance of the norm group in the Spring. Mid-year norms are based upon a linear model prediction of mid-year performance. For purposes of this study, the investigators chose to work with the following four literacy areas: word identification, writing vocabulary, sentence dictation, and text level.

Participants' Autumn 1998 pre-intervention and Spring 1999 post-intervention stanine scores on the previously-mentioned four sections of the survey were compared using four separate non-parametric (or distribution free) sign tests. The sign tests were selected as the method of data analysis because of the study's small sample size (N=11) and the ordinal nature of stanines, which does not allow for assumptions about the form of the distribution of differences. Siegel (1956) states that the only assumptions required to employ a sign test are that the researcher wishes to rank and compare two related samples, where the variable under consideration has continuous distribution. Alpha level was set at .05, which was deemed appropriate because Siegel's (1956) tables are recognized as conservative (Newman, Personal Communication).

In addition, running records were used as instruments to determine patterns of strategy usage.

Procedures

The eleven students were placed in a first grade classroom with their classroom teacher and a fully included Title I reading teacher. Based on the results from the observational survey, students were sub-grouped according to their needs into one of three reading groups. Levels of reading competency on their individual assessments were indicators of individual student's beginning levels of competency; however, flexible grouping permitted students to move from one group to another throughout the year. Guided Reading sessions lasted 20 minutes each and were conducted within the classroom by the Title I Reading Specialist.

Texts

Guided reading texts consist of small books of increasingly challenging levels of difficulty. The books provide colorful pictures and natural language which are engaging for young children. Many of the early literacy texts contain only a few words or phrases per page.

Instruction

During the Guided Reading portion of the class, students reread familiar stories then were introduced to new stories, based on their instructional reading level, and asked to read these independently. During independent reading of the new stories, the reading specialist listened as students simultaneously read the stories in their "soft voices" and determined children's strategy usage as they determined unknown words. Following the reading, students retold the story and discussed elements of what they had just read. Phonemic awareness lessons were taught based on the phonetic patterns within the story. The Title I teacher used a magnetic board and letters so that students could manipulate the letters and make new words. Following the phonemic awareness sessions, students reread their new stories. They then returned to their seats or to learning centers located within the classroom and placed the new stories in their take-home folders to read to their parents, while another reading group came to work with the reading specialist.

After the three Guided Reading sessions, students were then reorganized into one of two Project Read groups which were formatted to address individual needs of students. Students used multisensory approaches to work on letter-sound associations. Instructional methods included having students trace consonant letters in sand while pronouncing the sound. They also received systematic instruction in discrete foundational skills of literacy, beginning with consonant letters and progressing to short vowels, consonant blends and digraphs, and long vowels. New lessons were introduced once students demonstrated mastery of previous lessons and concepts. Again, groups remained flexible so that, as students mastered particular concepts, new concepts appropriate for group members could be introduced. Each concept was introduced by the Title I teacher using direct instruction and writing symbols in the air while saying the sound. Following the introduction, students practiced writing the letters or sounds in a phonics notebook as the Title I teacher wrote on the dry erase board. Children maintained phonic notebooks throughout the year. Finally, phonetic stories included in the unit which reinforced sound/symbol patterns were read and reread before being sent home with the children in their take-home folder so that they could read to their parents.

Objectives

There were two objectives that the researchers were investigating. In the first, we believed that, by participating in the combination of Project Read and Guided Reading, students would make significant gains in four literacy areas: word identification, writing vocabulary, sentence dictation, and text level comprehension. Secondly, we wanted to assess strategy usage for literacy development of at-risk students.

Results and Discussion

Sign tests analyze the positive (+), negative (-), and no difference (0) relationship between pairs of ranked scores. A statistically significant difference (P=.001) occurred between students' Autumn 1998 and Spring 1999 performance for all of the four sign tests. Table 1 lists the eleven students pre-intervention and post-intervention stanine scores for each of the four areas assessed. The direction of the differences between pairs (i.e., the post-intervention stanine <minus> the pre-intervention stanine scores) is also listed in Table 1. Notice that, for all eleven pairs of stanine scores on each of the four tests, the post-intervention (Spring 1999) and pre-intervention test scores (Autumn 1998) was positive (+). Employing differential Spring and Autumn norms, all eleven students performed better during the Spring 1999 post-intervention assessment than they did on the pre-intervention assessment (Autumn 1998).

Table 1

about here

Table 2 reports the median stanine scores for pre-intervention and post-intervention for the eleven students who participated in the study in each of the four literacy areas.

Table 2

about here

Table 3 through Table 6 present the results of each of the four sign tests. For each of the four areas tested (word identification, writing vocabulary, sentence dictation, and text level comprehension) post-intervention stanine scores were greater than pre-intervention scores for each of the eleven participants. Using SPSS, the exact two-tailed value for P was equal to .001 for each of the four sign tests, far below the .05 level set at the outset of the treatment.

Table 3 through Table 6

about here

The data support the hypothesis that students who participated in the Project Read/Guided Reading intervention show significant growth in reading in the four literacy areas (word identification, writing vocabulary, sentence dictation, and text level comprehension) targeted. This growth is based on a comparison of students' pre/post-intervention performance on the Analysis of Observations Survey (Clay, 1993) where differential and more developmentally challenging standards were employed in the post-intervention survey than were employed in the pre-intervention survey.

In addition to the significant and meaningful improvement in students' reading skills as measured within the four literacy areas assessed, students also demonstrated that they had acquired and regularly used a variety of strategies during their reading time. Students are taught to "cross-check" when they make oral reading errors and encouraged to ask themselves "Does that make sense?" as they read passages. The subjects in the study consistently monitored their reading and used self-correcting techniques when they did make oral reading errors. Project Read strategies, such as pounding out words or fingerspelling sounds, have proven particularly useful to several of the students who may eventually be identified as having a learning disability.

Students' daily reading homework also reinforced both Guided Reading techniques and Project Read lessons. One mother, a single parent, was quite concerned about her son's reading at the beginning of the year. Although she had worked with him during the previous summer, he did not recognize letters and letter sounds when he entered first grade. His kindergarten teacher was also quite concerned about his ability to read. Early assessments on this student indicated that he would struggle with both reading and writing. After engaging in the use of Project Read and Guided Reading, the young mother is encouraged about the progress her son has made. He has become a reader and, she reports, he enthusiastically hugs the books he brings home and begs to keep each one "forever." In the course of the year this student has become a reader and continues to improve as a writer.

Educational Importance

Assessment results indicate that using both Guided Reading and Project Read with at-risk readers in a first grade inclusion class is an effective effort at improving students' literacy skills. At-risk students, who may potentially be labeled learning disabled, are receiving needed interventions at an early point in their learning. The at-risk reader learns both top-down and bottom-up strategies and can employ them in thoughtful and meaningful ways, as all competent readers do. Also, since data gathering is systematic and ongoing, school psychologists can use this information as one consideration in early identification of students who may need to move into a multifactored evaluation for learning disabilities. Finally, since interventions are applied within the context of the students' own classroom, these students who may otherwise feel alienated, continue to feel part of their primary learning environment. Because of the in-class grouping, they also lose little time for learning to the travel that is part and parcel of pull-out remedial programs.

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Table 1

Difference Between 1998 Autumn Pre-Intervention Stanine Scores and 1999 Spring Post-Intervention

Stanine Scores in Four Areas of the Analysis of Observations Survey Based on Differential Norms

Subjects	Writing Vocabulary			Sentence Dictation			Word Test			Text Level		
	Post	Pre	Diff	Post	Pre	Diff	Post	Pre	Diff	Post	Pre	Diff
1	6	2	+	7	1	+	7	1	+	6	4	+
2	6	1	+	5	1	+	6	1	+	5	1	+
3	8	5	+	8	3	+	7	2	+	7	3	+
4	9	3	+	7	1	+	7	3	+	9	4	+
5	9	1	+	5	1	+	6	1	+	5	1	+
6	8	4	+	7	3	+	7	3	+	9	4	+
7	7	3	+	5	2	+	6	1	+	6	1	+
8	9	5	+	8	1	+	7	1	+	9	1	+
9	9	2	+	8	3	+	7	1	+	9	1	+
10	9	6	+	8	3	+	6	1	+	9	4	+
11	9	4	+	7	4	+	9	3	+	9	4	+

Table 2

Median Post-intervention and Pre-intervention Stanine Scores for the Eleven Students Tested in Four Areas of the Analysis of Observations Survey

	Writing Vocabulary		Sentence Dictation		Word Test		Text Level	
	Post	Pre	Post	Pre	Post	Pre	Post	Pre
Median	9	3	7	2	7	1	9	3

Table 3

Writing Vocabulary Sign Tests Results

Cases		
11	+	Diffs Writing Vocabulary Post > Pre Test
0	-	Diffs Writing Vocabulary Post < Pre Test
0		Ties
11		Total (Binomial) Exact 2 Tailed P =.001

Table 4

Sentence Dictation Sign Tests Results

Cases		
11	+	Diffs Sentence Dictation Post > Pre Test
0	-	Diffs Sentence Dictation Post < Pre Test
0		Ties
11		Total (Binomial) Exact 2 Tailed P =.001

Table 5

Word Test Sign Tests Results

Cases			
11	+	Diffs Word Test Post > Pre Test	
0	-	Diffs Word Test Post < Pre Test	
0		Ties	
11		Total	(Binomial) Exact 2 Tailed P =.001

Table 6

Text Level Sign Tests Results

Cases			
11	+	Diffs Text Level Post > Pre Test	
0	-	Diffs Text Level Post < Pre Test	
0		Ties	
11		Total	(Binomial) Exact 2 Tailed P =.001

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