Reprint

HELPING LOW-ACHIEVING FIRST GRADE READERS: A PROGRAM COMBINING READING RECOVERY TUTORING AND SMALL-GROUP INSTRUCTION

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RECENTLY, A GREAT DEAL OF ATTENTION HAS FOCUSED ON IDENTIFYING best practices in educational programs (Zemelman, Daniels, & Hyde, 1994). Cunningham and Allington (1994) argue that educators must look closely at the common characteristics of classrooms and programs where learning is a priority and ask, "What can educators learn from these programs?"

The Reading Recovery program is one such program with a long history of success in helping children who are experiencing early reading difficulties. It is designed to provide intensive one-to-one tutoring for the lowest-achieving children from first grade classrooms.

Although as Clay cautions, "most children do *not* require the detailed, meticulous and special Reading Recovery procedures or any modification of them" (1994b, *Introduction*) the theoretical principles that support this literacy program can inform instructional practices with small groups of low-achieving children, as well as instruction for all beginning readers. These principles include: (a) observing children as they engage in reading and writing events; (b) using children's known concepts as a basis for teaching unknown concepts; (c) employing a variety of *real* books and writing experiences to help children learn how to read; (d) accelerating children's literacy processes by providing balanced opportunities for independent and assisted learning on meaningful tasks; and (e) focusing instructional interactions at a strategic problem-solving level, in contrast to acquiring items of knowledge.

The effectiveness of Reading Recovery is well documented. However, schools that have successful Reading Recovery programs in operation sometimes find it difficult to employ enough Reading Recovery teachers to serve all children who need early intervention. Therefore, some researchers have focused on early interventions programs for working with low-achieving children in groups (see Hiebert & Taylor, 1993). Some schools have instituted programs that combine Reading Recovery and small-group literacy services, thus utilize the training, knowledge, and expertise of the Reading Recovery teacher and addressing the issue of cost-effectiveness.

An important study conducted by researchers at The Ohio State University examined the effectiveness of five different early intervention programs (Pinnell, Lyons, & DeFord, 1991). Individual tutoring programs included the Reading Recovery program, an adapted Reading Recovery approach, and a direct instruction skills program. Small-group tutoring programs included a reading/writing group taught by trained Reading Recovery teachers and a control group which consisted of the existing Chapter 1 school program.

The researchers concluded that the Reading Recovery program was the most powerful of the interventions studied. The reading/writing group taught by Reading Recovery teachers was not as effective. The researchers noted, however, that these teachers had not received training for transferring their knowledge of Reading Recovery theory to a group setting.

This article describes an approach that supplemented existing Reading Recovery programs with small-group early literacy instruction in 28 Arkansas public schools. The approach was developed to provide additional support for first grade children who needed early intervention, but for whom there was no space in the Reading Recovery program at the start of the year. The development of the early literacy project is described, with the evaluation conducted in Year 3 of the project discussed in detail.

Background of the Early Literacy Project

During 1991-1992 of the Reading Recovery program in Arkansas, an early intervention project was piloted in four Reading Recovery schools where Reading Recovery programs were already in operation. The program grew out of Arkansas Reading Recovery educators'

concerns about the high numbers of low-achieving children in Reading Recovery schools in the state of Arkansas. We feared that, without additional support, children unable to enter Reading Recovery in the first semester would fall further behind in the regular classroom.

Clay (1994b) argues that children habituate inappropriate reading behaviors in a short amount of time; as a result, they become resistant to instructional changes. Our concern was that children who had to wait until later in the year for Reading Recovery services would find it harder to catch up with their classmates.

Under the pilot program, the lowest-achieving students in the first grade classroom received Reading Recovery intervention. At the same time, children who qualified for the Reading Recovery program but had been placed on the waiting list because of lack of space in the regular program received small-group instruction from Reading Recovery teachers. Each Reading Recovery teacher provided individual instruction to five students and also taught two early literacy groups of five low-achieving first grade students on a daily basis.

Early in the school year, Reading Recovery teachers who served small groups of children received two inservice classes on early literacy and at least two school visits from the teacher leader to observe and support the group program. During the spring and summer semesters, graduate courses in early literacy instruction were offered at the university. Most Reading Recovery teachers participated in these courses.

At the end of the pilot year, preliminary data from the study indicated that schools using the Reading Recovery/Early Literacy program were able to serve and successfully discontinue greater numbers of low-achieving first grade children than were schools without the small-group component. The following year, 12 Arkansas schools elected to use the Reading Recovery/Early Literacy program, and the program was further developed and researched.

During the third year, based on positive results from previous years, a total of 28 Arkansas schools adopted programs that included Reading Recovery for the lowest-achieving children and small-group literacy instruction for children on the Reading Recovery waiting list. At the end of Year 3, nearly 400 children had participated in small-group instruction with a total of 34 Reading Recovery/Early Literacy teachers.

Development of the Small-Group Program Over Three Years

Our small-group program was based on an organizational structure suggested by The Ohio State Reading Recovery program for areas that serve large numbers of at-risk children. Arkansas teachers have participated in extensive training at the University of Arkansas at Little Rock (UALR) and have made changes and refinements based on personal experiences in working with groups of low-achieving children. The following examples illustrate important shifts in our work with group instruction.

Length of daily group sessions. In Year 1, groups met for 30 minutes daily. During the second year, teachers expressed a need for more time with the group, and the daily group lessons were lengthened to 45 minutes.

Working with a focus child. During the second year, teachers expressed the need to spend more time with individuals within the group. Since group members exhibited a range of literacy behaviors, the one-to-one attention enabled the teacher to focus more exclusively on the strengths and needs of individual children. It also provided the teacher with an ongoing record of progress for each member of the group, therefore guiding the teacher in making more effective decisions based on the collective needs of the group.

Less time on literature extension activities. During the second and third years, teachers evaluated the amount of time devoted to art and drama activities in the group program. They

reasoned that children were involved in these events in first grade classrooms, and the most productive use of time was actual reading and writing activities. An exception to this was the drawing of a picture during the journal writing component and illustrations for student-written books.

Letter and word building component. Because many group children had very limited print knowledge, teachers saw the need to incorporate more opportunities for children to learn about letters and words. As a result, at the beginning of Year 3, this component was added to the group program. Print-related activities were based on current theories of phonological awareness (Clay, 1993, Goswami & Bryant, 1990) and the work of Cunningham and Allington (1994).

ABC shared reading. This component was added during Year 2, after a visit from a colleague in Ohio. In the activity, children begin the session with a shared reading of a chart containing the letters of the alphabet. A reduced version of the chart is used to assist children during independent journal writing time.

During Year 3, the chart was modified to accommodate the strengths and needs of the individual and group children: (a) letters on the chart were cut apart and mounted with one letter on each page in a Big Book, which the group read as a shared event and (b) letters from the chart were reduced and bound into a small ABC book, which was used during one-to-one instruction with the teacher and the focus child. Teacher judgement was used in determining the most appropriate use of the ABC chart with different groups. Some teachers noted that as children became more successful readers and writers, the chart was not a productive use of student time.

Current Instructional Components of the Early Literacy Small-Group Program

By Year 3, the early literacy small-group program had been refined to include the following components, which were generally organized in a very predictable format.

Activities using children's names. Clay (1991) describes how the child's name forms a network for acquiring all kinds of information. Teachers design a variety of activities using the names of group children to promote attention to the forms, functions, and relationships in written language (for example, upper and lower case forms, concept of letter and word, similarities and differences between letters, word length, and concept of first and last).

Shared reading of ABC chart or book. This activity supports children in acquiring knowledge of letters and a special picture/sound cue for forming a link to the letter. The teacher and children read the chart together, and a reduced version of the chart or book is placed with each child's journal for an independent resource. The teacher uses information from the chart as a special cue for linking to various reading and writing activities throughout the lesson.

Reading of familiar materials. The rereading of easy materials provides the children with opportunities for independent, fluent reading. In addition to books, children read familiar charts, group written stories, and other written artifacts hanging in the room.

Independent reading/running record. The purpose of this activity is to provide a child within the group with opportunities to practice strategy use on a new book that was introduced the previous day in the group setting. As the child reads the book in a one-to-one setting, the teacher takes a running record. Afterwards, the teacher selects two or three teaching points to promote the child's problem-solving activity.

Shared reading. During shared reading, the teacher engages the children in making predictions, reading fluently, and problem-solving activities within a supportive group setting. Materials used include commercial Big Books, chart stories, poetry, and teacher-written materials.

Teacher read aloud. This activity provides children with opportunities to hear the rich vocabulary and gain content knowledge from stories they would be unable to read independently.

Word analysis. This activity is designed to promote the use of problem-solving strategies for exploring and manipulating words. Materials used include magnetic letters, sentence strips, word cards, student-generated lists, and word walls. Although some activities are preplanned, most words are taken from reading and writing events under discussion at the time.

Interactive writing. This activity promotes attention to conventions of written language within a supportive group setting. Instruction focuses on the acquisition of early reading and writing behaviors that are necessary for children's success in reading: (a) conventions of print, such as directional movement, one-to-one matching, concepts of word and letter, etc; (b) hearing sounds in words; and (c) acquiring some high frequency words. During interactive writing, the teacher uses explicit language and actions to channel the children's attention to particular concepts of written language. In the early stages, the writing is characterized by predictable, repetitive language patterns; but as children acquire more knowledge about print, messages become more varied and complex (for example, writing a letter, the morning news, etc.). The teacher and children share in the actual writing of the message.

Shared writing. As children acquire early reading and writing behaviors, the activity shifts to the writing process. During shared writing, the focus is on the construction of a meaningful story, with less emphasis on the print itself. The teacher does most of the writing, while engaging the children in dialogues about the story development. Generally, the completed story is too long for the children to read independently. The teacher recopies the story from the chart tablet into a Big Book with appropriate lines of text that are supportive of the children's reading. The children illustrate the book, which is used for shared and familiar reading events.

Journal writing. Journal writing provides children with opportunities to apply their developing knowledge of writing in an independent setting. Prior to implementing journal writing, the teacher demonstrates the process to the group. As she writes a story, she verbalizes her problemsolving actions. Generally, journal writing stems from a previous activity, such as shared reading or a book that the teacher has read to the group. Before writing, the children are encouraged to tell their story to the group. As the group writes independently, the teacher works one-to-one with the focus child. Afterwards, the teacher responds to each child's message, praises the child for sounds heard, and selects a quick teaching point for each child.

Cut-up sentence. This activity occurs in a one-to-one situation between the teacher and the focus child. The purpose is to promote the child's visual searching behaviors. Following the writing lesson, the teacher writes the message on a sentence strip, cuts it at appropriate points, and asks the child to assemble the message in a special book. One child a week receives this extra attention.

Introducing a new story. A new book is carefully selected for the next day's focus child and introduced in the group setting at the end of each day's lesson. The teacher asks specific questions to the child who will read it the following day. Also, the teacher prompts the child to read particular pages independently. After the first reading, the group engages in a fluent reading of the story.

Evaluation of the Reading Recovery/ Early Literacy Group Program: Year 3

Based on findings from Years 1 and 2, the purpose of the current study was to further explore the effectiveness of this early intervention program, which used Reading Recovery for the lowest-achieving children and a small-group literacy instructional program for children unable to be served immediately by Reading Recovery.

Subjects and Setting for the Study

Sites. A total of nine schools across three districts were selected to participate in this study. Each school district contained a Reading Recovery program and a small-group early literacy program. One district had seven schools with a Reading Recovery teacher in each school. The remaining two districts contained one school each, with two Reading Recovery teachers per school.

Teachers. A total of eleven Reading Recovery teachers participated in this study. Three of the teachers had master's degrees in reading and five were currently working on completing their degrees. Teacher selection was based on the following criteria: (a) teachers had received training in small-group instruction through the University of Arkansas at Little Rock's early literacy program and (b) teachers kept good documentation on the progress of Reading Recovery and small-group children.

Students. Due to mobility in the schools and missing data on several literacy group children, the original sample was reduced. The final analytic sample consisted of a total of 231 students from nine schools who participated in one of the following programs: (a) Early Literacy small-group only, (b) Early Literacy small-group followed by Reading Recovery, or (c) Reading Recovery only.

Outcomes Measures

Diagnostic testing was administered at entry and exit for both Reading Recovery and small-group literacy programs. The six measures are described.

Letter Identification. Children were asked to identify 54 letters (lower case, upper case, and printed a and g). Credit was given if the child knew the name of the letter, the sound for the letter, or a word beginning with the sound of the letter.

Ohio Word Test. Children were asked to read a list of 20 high frequency words commonly encountered in a beginning reading program.

Concepts About Print. Using a little book, children were asked a series of 24 questions to assess their awareness of particular concepts about print (e.g., front of the book, message contains the print, directional movement, one-to-one correspondence of spoken/printed language, etc.).

Writing Vocabulary. Children were asked to write all the words they knew how to write in ten minutes, starting with their own names and including basic vocabulary and other words.

Dictation. A short story was read to the children and they were asked to write the story, one word at a time. In scoring, children were given credit for every sound represented correctly, thus indicating their ability to analyze and record sounds in words.

Text Reading. Children were given the title of a book selection(s), a brief standard introduction to the story, and were asked to read text materials in graded levels of difficulty. The child's text reading level indicated the highest level of text that the child was able to read at 90 percent accuracy or above.

Types of Intervention Programs

Based on the results of assessment criteria, low-achieving children were selected to participate in the most appropriate literacy intervention program. The three interventions are described. *Reading Recovery*. The lowest achieving children received one-to-one tutoring for 30 minutes daily with a Reading Recovery teacher. When a child showed evidence of attaining a self-extending system for independence in reading, the child was returned to the first grade classroom

and received no further intervention. Research has shown that 60 lessons is the average number required for children to reach satisfactory reading levels.

Early Literacy Small-Group. Children who initially were not as low-achieving as the Reading Recovery group received literacy instruction in small groups of five children each for 45 minutes daily with a Reading Recovery teacher. These children did not move on to Reading Recovery tutoring for various reasons: some reached average levels of reading performance with group instruction only and needed no further intervention, some remained in the group program during the entire first grade year because an opening in Reading Recovery was not available, and others scored too high to be eligible for Reading Recovery services.

Reading Recovery with Prior Experiences in Early Literacy Small-Group. The lowest-achieving child from the small-group program received one-to-one tutoring in Reading Recovery when an opening became available at a later time in the first grade year.

Research Questions and Results

Question #1. What proportions of low-achieving children in the project schools received Reading Recovery and small-group intervention programs?

Intervention services for a total of 231 children were analyzed. Of this number, 95 (41 percent) received Reading Recovery tutoring only, 93 (40 percent) received small-group early literacy program services only, and 43 (19 percent) received both small-group and Reading Recovery services. Based on these numbers, the 11 Reading Recovery teachers provided early intervention to an average of 21 low-achieving first grade children during the school year.

Question #2. What was the progress of children who participated in a small-group program and achieved average levels of reading performance without requiring Reading Recovery? Of the 93 children who received only small-group early literacy instruction, 28 children (30 percent) reached successful levels of reading achievement with an average of 48.5 lessons. Table 1 displays the progress of these students from entry to exit points in the small-group program.

Children who were selected for small-group literacy instruction generally entered the program with higher levels of item knowledge (as evidenced by measures 1-5) than children who were selected for individual tutoring in the Reading Recovery program, but were unable to integrate sources of information in text reading (as evidenced by measure 6). At exit from a small-group program, the children had attained successful levels of reading achievement, as evidenced by their ability to read at 90 percent accuracy or above on text level 19, which approximates a second grade reader.

It should be noted than the 28 children who were successfully released from the group program had originally met the criteria for entry to a Reading Recovery program—that is, they had been among the lowest-achieving readers in their first grade classrooms, although there had not been room for them in Reading Recovery. The fact that these children were brought up to grade level with only the small-group intervention enabled Reading Recovery teachers to focus one-to-one instruction on the lowest-achieving children.

Question #3. What was the progress of discontinued Reading Recovery children who participated in a small-group program prior to entering Reading Recovery?

Forty-three children received both the small-group program and Reading Recovery tutoring. Of these children, 24 (56 percent) were successfully discontinued from Reading Recovery after an average of 25 lessons. Table 2 shows the progress of the children on measures of Writing Vocabulary, Dictation, Text Reading Levels and mean number of lessons received in

Table 1
Children Who Reached Successful Levels of Literacy in Small-Group Literacy Program:
Entry and Exit Mean Scores

		Mean Scores		
1	Measures	Entry	Exit	
	Letter Identification (max = 54)	50	54	
!.	Ohio Word Test (max = 20)	03	19	
١.	Concepts About Print (max = 24)	11	20	
	Writing Vocabulary (number of words written in 10 minutes)	11	47	
	Dictation (max = 37)	16	36	
	Text Reading Level (max = 24)	01	19	

n = 28 children on all measures, with exception of Concepts About Print, for which n = 24 children.

Early Literacy Group (ELG) and Reading Recovery (RR). It should be noted that children's exit data from the small-group program are used as entry data into the Reading Recovery program.

The data indicate that the small-group instruction these children received while waiting to enter the Reading Recovery program helped them acquire a writing vocabulary and knowledge of sounds within words. The reading and writing format of the small-group literacy program is structured to expose children to varied experiences for acquiring these early behaviors. Although a text reading level of 5 (preprimer) is below satisfactory performance for a self-extending system, the children's ability to read this level at 90 percent accuracy indicates some knowledge of the reading process. These data suggest that the increased rate of acceleration (25 lessons) of the children who went on to be successfully discontinued from Reading Recovery may have been facilitated by their prior participation in the small-group literacy program.

Question #4. Does participation in a small-group program for waiting list Reading Recovery children influence the rate of accelerated progress when children enter Reading Recovery at a later time in the year?

In order to answer this question, the rate of acceleration was calculated according to the mean number of lessons received by discontinued Reading Recovery children, with and without prior instruction in a small-group program. Of the total number of 95 children who received Reading Recovery services with no prior experiences in a small-group program, 72 (76 percent) discontinued from Reading Recovery with an average of 65 lessons. Generally, this group was comprised of first-round children. Of the total of 43 children who participated in the small-group program prior to receiving Reading Recovery services, 24 (56 percent) discontinued from Reading Recovery with an average of 25 Reading Recovery lessons. Further analysis

indicated that small-group children received an average of 40 lessons in the group program prior to Reading Recovery; thus, their combined average number of small-group and Reading Recovery lessons (66) was almost the same as the average number of tutoring sessions (65) received by discontinued Reading Recovery-only children.

Table 2
Mean Scores of Discontinued* Reading Recovery Children with Prior Instruction in the Early Literacy Group Program

Testing Periods	п	wv	DIC	TRL
Entry to ELG	24	09	11	01
Exit from ELG/Entry to RR	24	30	31	05
Discontinued* from RR	24	46	36	16

^{*}Discontinued refers to Reading Recovery children who have reached average levels of reading competence and have been returned to the regular classroom.

Question #5. What was the progress of non-discontinued Reading Recovery children who participated in a small-group program prior to entering Reading Recovery?

Of the 43 children who entered the Reading Recovery program after first receiving small-group instruction, 19 children (44 percent) did not successfully discontinue. It is important to analyze the progress of this group of children from point of entry to exit in both programs. Table 3 displays these results.

In analyzing the data from non-discontinued Reading Recovery children who had received prior instruction in a small-group program, several interesting findings emerged. The results of this group of non-discontinued children were compared with a state random sample of 50 first grade children at the end of their first grade year. Random sample results indicate that the average first grade student was reading at a text level 12 at the end of the year, which approximates a beginning first grade reading series (see Dorn, 1993).

In the current study, seven children from the total population of 19 non-discontinued children scored at the average reading level of the state sample. However, the scores did not meet the high standards of Reading Recovery; and as a result, the children were not considered as successfully discontinued. Even among the remaining 12 children, notable progress was documented, with mean gains in writing vocabulary, dictation, and text reading ability.

WV = Writing Vocabulary (words written in 10 minutes)

DIC = Dictation (highest possible score = 37)

TRL = Text Reading Level (16 approximates ending first grade reader; 24 approximates third grade reader)

Table 3
Mean Scores of Non-Discontinued* Reading Recovery Children with Prior Instruction in the Early Literacy Group Program

			Mean Scores		
Testing Periods	n	wv	DIC	TRL	
Entry to ELG	19	05	07	00	
Exit from ELG/Entry to RR	19	18	20	03	
End of School Year in RR	19	32	30	08**	

^{*}Non-Discontinued refers to Reading Recovery children who did not reach average levels of reading competence by the end of their Reading Recovery program.

TRL = Text Reading Level (16 approximates ending first grade reader; 24 approximates third grade reader)

Summary

The current study was designed to examine the effectiveness of a two-level intervention model that used Reading Recovery and small-group instruction for low-achieving children. The data was analyzed on 231 children from nine schools who participated in one of the intervention programs. Important findings from the study include the following:

- The combination of individual tutoring and small-group instruction enabled each Reading Recovery teacher to serve an average of 21 low-achieving children during the academic year.
- Of a total of 231 children served, 138 (60 percent) received one-to-one instruction in Reading Recovery at some point during their first grade year.
- Of the total number of 93 children who received small-group instruction, 28 (30 percent) reached average levels of reading performance without requiring Reading Recovery services.
- Of the 43 children who received small-group instruction and then went on to Reading Recovery, 24 (56 percent) were successfully discontinued at an average of only 25 lessons in Reading Recovery, as compared with an average of 65 lessons for discontinued Reading Recovery-only children. Thus, the time for these children to be discontinued from Reading Recovery was cut by more than 60 percent.
- Among the remaining 19 Reading Recovery children with prior small-group instruction, notable gains were made in all areas of reading, writing, and dictation tasks when compared with a state random sample of first grade students.

Conclusions

The results from this study must be interpreted with several cautions. First, it is important to recognize the complex nature of the reading process, which is influenced by cognitive, social, and cultural factors in the child's environment. In this study, children's scores on a variety of tasks served as a basis for assigning individual children to the most appropriate intervention program. However, the children's rate of accelerated progress in different programs is influenced by other factors, including the effectiveness of the Reading Recovery teacher's

^{**}Text Reading Level 8 approximates the end of PP3 reader.

WV = Writing Vocabulary (words written in 10 minutes)

DIC = Dictation (highest possible score = 37)

decision-making processes and the types of literacy opportunities provided to the children by the regular classroom teacher.

Second, it must be emphasized that Reading Recovery is the most effective program for the lowest-achieving first grade children (Pinnell, Lyons, & DeFord,1991). In discussing the powerful effects of individualized instruction for failing children as compared to small-group instruction, Clay (1994b) explains the difference:

[Individualized instruction] allows for a revolutionary change in teaching, devising lessons which work out from things the child can already do, and not from the teacher's preselected programme sequence. When two or three children are taught in a group the teacher cannot make this change; she has to choose a compromise path, a next move for 'the group.' To get results with the lowest achievers the teacher must work with the particular (and very limited) response repertoire of a particular child using what he knows as the context within which to introduce him to novel things. (p. 8)

Findings from the current study support this notion. The proportion of children discontinued from the small-group literacy program could not equal to the high discontinuing rate of children from the Reading Recovery program.

However, the purpose of small-group instruction was to provide support for low-achieving children unable to receive Reading Recovery at a crucial time in their development of reading competence. The findings indicate that the small-group program enabled Reading Recovery teachers to provide timely support to large numbers of these children. Later in the year, when space opened for them in the Reading Recovery program, these children made accelerated progress and were discontinued in less than half the time required by Reading Recovery-only children.

As a bonus, about 30 percent of children participating in the small-group program reached average levels of reading performance without requiring individual tutoring, enabling Reading Recovery teachers to focus one-to-one instruction on the first grade children who needed it the most.

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