A study investigated whether the practice of repeated reading enables first-grade children participating in a heterogeneous grouping model (which requires them to read difficult text) to acquire the fluency, accuracy, and understanding necessary to become independent readers. Subjects were four children from a public first-grade classroom in a predominantly white, middle-class suburb of Boston, Massachusetts. All children in the classroom were instructed using a combination of first-grade texts of a basal reading program and trade book literature. During the intervention phase, the teacher read the story aloud, the subjects read the story as a chorus with the whole class or in a small group, and the subjects read the story four more times with a partner over a period of several days. The intervention occurred for a minimum of 5 days. Assessment had two components: students read the selection aloud and retold the story in their own words. Results indicated that the four subjects experienced substantial improvement in accuracy, fluency, self-correction behaviors, understanding of grade-appropriate text, and ability to retell stories. Findings suggest that repeated readings enabled struggling readers to participate successfully in the first-grade curriculum, and the struggling readers succeeded in learning to read difficult text when the practice of repeated reading was combined with a full array of effective early reading strategies. (Contains 21 references and 4 figures of data. An appendix lists the reading materials used.) (RS)
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in a heterogeneously grouped first grade
Using repeated reading to promote reading success in a heterogeneously grouped first grade

The purpose of this study was to provide information about the effects of repeated reading on the reading achievement of academically at-risk children in a heterogeneously grouped first grade. A single-case experimental design was used to explore whether it was possible to make grade-appropriate text accessible to the lowest performing students in a first grade classroom through systematic and routine use of repeated reading. Specifically, the following question was investigated: Will the use of repeated reading with grade-appropriate text enable academically at-risk children taught in a heterogeneously grouped first grade to achieve first grade standards in reading performance as measured by: (a) the ability to reread grade-appropriate text with 95% accuracy? (b) the ability to self-correct one word in three to five errors while reading connected text? (c) the ability to reread grade-appropriate text at a speed of 85 words per minute? (d) the ability to retell a story to include major story structure elements?

Rationale

The context for the study was a first grade classroom where children were grouped heterogeneously for reading instruction. The grouping paradigm was a response to the work of researchers such as Robert Slavin (1987) who reported little evidence of the benefit of ability grouping for reading achievement particularly for low performing students. While heterogeneous grouping is responsive to concerns about tracking children in low ability groups, it raises different questions about meeting the needs of the lowest performing readers. There is some evidence that when teachers modify instruction in particular ways, students who are expected to find grade-appropriate text too difficult experience reasonable levels of success. For example, Hall and Cunningham (1992) demonstrated that when low performing first grade students were given extra tutorial support or small group support as necessary, they experienced success in a heterogeneously grouped reading class. In addition, the researchers
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reported that the progress of the high performing students was not hindered by this grouping plan.

Repeated readings have long been advocated as one means of providing extra tutorial support to increase fluency, accuracy, and comprehension in reading. Studies have indicated that fluency can be increased through both assisted and unassisted repeated reading. Holdaway (1979) suggested that beginning readers benefited from rereading text just as young children benefited from reading and rereading favorite storybooks. In this way all children in a classroom could participate in the introduction of the same story, with some children needing more repetitions before attempting independent reading. Chomsky (1976) used assisted readings by having children listen to taped-recorded stories while following in the text until they could read the story independently. Samuels (1979) used unassisted repeated reading and found that children read with greater fluency. Dowhower (1987) and Rasinski (1990) compared the effectiveness of the methods of assisted and unassisted repeated reading and found that both methods resulted in improved accuracy, fluency and comprehension.

Studies have also shown that comprehension improved with repeated reading when measured by unstructured recall such as story retellings (O'Shea, Sindelar, & O'Shea, 1985; Taylor, Wade, & Yekovich, 1985) and by structured recall framed by text explicit and text implicit questions (Dowhower, 1987; Reutzel & Hollingsworth, 1993). Additionally, findings from several studies suggest that the fluency gained from repeated reading transfers to a general improvement in reading fluency (Samuels, 1979; Weinstein & Cooke, 1992). Taken together, these studies provide compelling evidence of the effectiveness of repeated reading for improving reading fluency, accuracy and comprehension. Yet few of these studies focus specifically on academically at-risk first grade students.

This study was designed to investigate whether the practice of repeated reading enables first grade children participating in a heterogeneous grouping model which requires them to read difficult text to acquire the fluency, accuracy, and understanding necessary to become independent readers. The classroom teacher served as one of the researchers in this study.
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Methodology

Subjects

Subjects were 4 children from a public school first grade classroom in a predominantly white, middle class suburb of Boston, Massachusetts. There were 25 children in the classroom. Subjects were identified using the following criteria: (a) scores below the 45th percentile on the Pre-Reading Composite from Level 2 of the Metropolitan Readiness Test (Nurss & McGauvran, 1986) which was administered in October, 1993 and (b) identification as a child who was "at risk" for failure in first grade by the classroom teacher. Since these were the same criteria used in the school system to identify children for Chapter I services, all of the identified subjects were eligible for Chapter I but only one student received the support. The teacher/researcher could have recommended the other 3 students for Chapter I services but chose not to because of the variety of reading experiences provided in the classroom.

Materials

All children in the classroom were instructed using a combination of first grade texts of a basal reading program and trade book literature. The basal program, used system-wide, is an anthology of children's literature judged to be of high literary quality, characterized at the first grade level by predictable and patterned language including rhythm, rhyme, and repetition. The supplementary trade books met the same criteria and were chosen for their compelling story line, first grade readability, and compatibility with the reading themes emphasized in the basal program.

Fourteen narrative texts were used for the study. These were the texts that were used for instruction in the classroom between March and June. Half of the selections were from the basal anthology and half of the selections were trade books. This percentage represented the ratio of basal anthology and trade book selections used during the year in this classroom. A list of the selections is included in Appendix A. Since one of the assessments required students to retell the story including all of the major story structure elements, each selection chosen for
the study contained clear story structure elements: characters, setting, theme, plot episodes, resolution, and ending.

Context for the Study

Instructional model. All children in the class were instructed using a flexible grouping model (Paratore, 1991), based on heterogeneous whole class instruction and needs-based small group instruction. This model was designed to eliminate low ability groups and their negative accompanying effects and yet meet individual needs through differentiated teaching. The flexible grouping model utilized a variety of instructional practices including whole class, small group, and cooperative pairs. Whole class instruction was employed for: presenting new material, teaching specific strategies and skills, reviewing previously taught material, teacher modeling, guided practice, and providing feedback and correction. Small group instruction included any of the above mentioned components except presentation of new material. In addition, the small group provided a setting for independent practice and for additional review to meet the specific needs of the children in the small group. Finally, cooperative pairs were used to reread a selection, to complete writing tasks, and to share written responses.

Each reading session started with whole class instruction and discussion. In preparation for reading, the teacher instructed the whole class by accessing and developing background knowledge, often through the use of a semantic map. The children made predictions about the content of the selection and set a purpose for reading. The teacher read the selection aloud in order to familiarize the children with the concepts and language of the text. A whole class discussion followed the initial read-aloud in order to facilitate understanding of the selection. Following the discussion, children read the selection as a chorus with the teacher assisting any children having difficulty fingerpointing to text as they read.

At this point the children were divided into a challenge group and an extra help group. Children in the challenge group worked with a partner to read the selection, to formulate a written response, and to practice reading part of the selection until they could read it fluently. Children in the extra help group worked with the teacher to review vocabulary and phonics.
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**Spelling-Sound Instruction.** Each day the whole class was involved in 10-15 minutes of spelling-sound instruction which correlated to the vocabulary in the selection being read (Juel & Roper/Schneider, 1986). During a typical lesson, sentences from the selection were read aloud, while children listened for a target sound. As children identified words with the target sound, each was written on the chalkboard. Children examined the words and identified the spelling pattern that represented the target sound. Words with the target sound were dictated for children to record in journals or on individual chalkboards.

**Single-case Experimental Design**

A multiple baseline design across subjects (Baer, Wolf, & Risley, 1968) was used to assess the effectiveness of repeated reading. All students began baseline at the same time, but only one student at a time began the intervention phase. After 3 days of baseline data, when a stable trend was achieved in accuracy, the first student was exposed to intervention on day 4, but the other students continued in baseline. The performance of the students involved in the intervention was expected to change while the performance of the other students continuing in baseline was expected to continue unchanged. As each student reached a consistent level of reading accuracy in baseline, the intervention was applied to the next student until all students experienced intervention.

**Procedures**

During each day of baseline, the students were given a selection to read for which they had received background knowledge and vocabulary instruction within the whole class group. Prior to the read-aloud by the teacher, the students read the selection silently followed by the baseline assessment. The assessment had two components: (a) students read the selection aloud and (b) students retold the story in their own words.

During the intervention phase, the students were exposed to the same background knowledge and vocabulary instruction within the whole class group. In addition, the following steps were initiated: (a) the teacher read the story aloud, (b) the students read the story as a chorus with the whole class or in a small group, and (c) the students read the story four more
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times with a partner over a period of several days. Following the rereadings, the assessment procedure took place as outlined in the description of baseline. The intervention occurred for a minimum of 5 days. In accordance with multiple baseline across subjects design, intervention was deliberately initiated at different times for each student. Prior to initiating intervention, each student achieved stability in baseline. Student 1 experienced 11 days of intervention, student 2 experienced 9 days, student 3 experienced 7 days, and student 4 experienced 5 days of intervention.

Data Sources

Of primary interest was accuracy in reading connected text and self-correction rate. Accuracy was calculated by dividing the number of correct words read by the number of total words read (Clay, 1979). Self-correction rate was calculated by forming a ratio between the number of self-corrections and the number of self-corrections plus errors (Clay). The retellings were assessed quantitatively following Morrow’s (1988) procedures. Each story was parsed into eight scoreable units and one point was assigned for each of the following units: introduction, main character, other characters, statement about time or place, theme, plot episodes, resolution, and ending. Two points were assigned for proper sequence or one point for partial sequence. The data were evaluated by visual inspection which consisted of examining a graphic display of the data. In addition, the split-middle method (White, 1972; 1974) was used to provide a more reliable estimate of trend in the data.

Results

Figure 1 presents the reading accuracy of each child during baseline and intervention.

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Insert Figure 1 about here

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Students averaged 97% accuracy during intervention which was a substantial increase from the average of 73% during baseline. Visual inspection indicates that the level of performance changed significantly from baseline to intervention with intervention demonstrating a
Using repeated reading to promote reading success remarkably higher performance level than baseline. In addition, levels changed immediately after the intervention was introduced suggesting a clear effect of the intervention.

Self-correction rates during baseline and intervention are presented in Figure 2. The four students averaged a self-correction rate of 1:11 or 9% in baseline and increased to an average of 1:2 or 50% in intervention. As with accuracy, the level of performance changed from baseline to intervention with the intervention level demonstrably higher than the baseline level. In addition, the celeration lines derived from the split-middle method suggest that three of the students showed a slightly downward trend in baseline and achieved stability in intervention. Levels changed immediately after intervention and remained changed during intervention, indicating that change in performance can reliably be attributed to the intervention.

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Insert Figure 2 about here

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Although none of the students was able to achieve a reading rate of 85 words per minute, all students were able to read 3 times as many words per minute during intervention as they did during baseline. As with accuracy and self-correction rate, Figure 3 demonstrates that there was a higher level of performance during the intervention phase than there was during the baseline phase.

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Insert Figure 3 about here

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As with the other variables, the levels changed immediately after the intervention was introduced suggesting that the effect was attributable to the intervention and not to extraneous factors. However, Tony and Dan demonstrated a slight decelerating trend in intervention and Tony, Dan, and Andrew showed variability in their intervention data.
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All students' comprehension scores increased during intervention. Students included an average of 62% of the major story structure elements in their retellings during baseline and increased the average to 93% during intervention. (see Figure 4)

Performance levels in intervention were higher than performance levels in baseline. Additionally, all students showed an immediate change upon introduction of the intervention. However, since baseline stability was dependent on accuracy scores and not on scores for retellings, Michael and Dan did not achieve stability in baseline but showed an accelerating trend. In intervention, Michael, Tony, and Andrew showed stability while Dan demonstrated a decelerating trend.

Discussion

As a result of the increasing use of heterogeneous grouping in first grade classrooms, many emergent and beginning readers are routinely instructed in a common, grade-appropriate text for at least part of their instructional reading program. This practice has caused many teachers to question the consequences of heterogeneous grouping for the lowest performing children whose independent reading levels are often far below grade-appropriate text. The purpose of this study was to investigate the effectiveness of repeated reading as one means of enabling first grade struggling readers to successfully participate in the classroom literacy community when sharing the same text as their peers. Results indicated that, with repeated reading as an intervention, the 4 subjects in the study experienced substantial improvement in accuracy, fluency, self-correction behaviors, and understanding of grade-appropriate text.

Improvements in accuracy, fluency, and self-correction behaviors are particularly convincing. While the increase in accuracy may be interpreted by some as evidence of memorization due to repeated reading, the children's attention to errors and increase in self-correction behaviors suggest otherwise. As Clay (1979) has suggested, self-corrections
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demonstrate that children are aware that a message is being communicated in the text so that when they make an error which distorts meaning, they return to the error and correct it so that the message is communicated. These subjects' self-correction behaviors indicate that they attended to both the word level and the meaning level of the text.

As in other studies (e.g., Dowhower, 1987; Samuels, 1979), repeated reading helped these first graders develop familiarity with vocabulary, content, and style of text. It is likely that these factors influence reading rate. Students in the present study were able to read 3 times as many words per minute after rereading the selection as they did on the first reading. The failure of the children to achieve the 85 word-per-minute criterion established in an earlier study with first-grade readers (Samuels, 1979) is likely due to the difference in the focal text. While the study by Samuels had children read easy text to achieve the criterion, the subjects in this study read text that was judged to be difficult and at their frustration level. The robust findings from the current study, an increase from 73% accuracy to 97% accuracy, suggest that rereading made difficult text easier to the extent that it changed frustration level text into instructional level text.

The success of these first grade children on difficult text is consistent with work published earlier by Gonzales and Elijah (1975). While working with older students, they, too, used text that initially proved difficult for children, and found that with one rereading, frustration level text became classified as instructional level text.

In addition to an increase in accuracy, self-correction behaviors and fluency, these first graders displayed an increase in their ability to retell stories. These results are consistent with those from earlier repeated reading studies (O'Shea, Sindelar, & O'Shea, 1985; Reutzel & Hollingsworth, 1993).

While data from a sample of only 4 students cannot be generalized to the larger population, the results raise some important points for discussion. First, while most previous studies focused on the use of repeated reading with second through fifth grade children, this study used the practice with children at the very beginning stages of reading. Findings suggest
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that the procedures enabled struggling readers to participate successfully in the regular first grade curriculum. These results may cause us to rethink and re-examine the commonly-held belief that instruction in difficult text diminishes children’s acquisition of fluency and independence in reading. Is it the case that the level of text difficulty is less important than the scaffolding and support children are provided when they read difficult text? Should we consider revisiting the criteria we use to place children in instructional text?

Second, in this study, when the practice of repeated reading was combined with a full array of effective early reading strategies, struggling readers succeeded in learning to read difficult text. When children are provided this type of intervention during their early experiences in reading, will they acquire a level of independence and fluency in reading similar to their higher performing peers? The children in this study are now being followed as second graders to determine their level of success with increasingly difficult materials. Although the questions posed cannot be answered without replication data, there is enough evidence here to suggest the need for further study.

References


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Appendix A: Texts Used for the Study

**Basal**

*Tiger Runs* by Derek Hall
*Strange Bumps* by Arnold Lobel
*I Am Scared* by Ivar da Coll
*The Surprise* by George Shannon
*Whale in the Sky* by Anna Siberell
*The Three Little Pigs* retold by Paul Galdone
*Dance Away* by Jose Aruega

**Trade Books**

*Josephine's Night Out* by D. Marion
*The Wishing Well* by Arnold Lobel
*Alone* by Arnold Lobel
*Three Wishes* by James Marshall
*Some Fun* by James Marshall
*Your Friend, Little Bear* by Else Minarek
*Little Bear and Emily* by Else Minarek
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Figure 1. Percentage of accuracy in reading selections during baseline and intervention.
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Figure 2. Percentage of self-corrections while reading selections during baseline and intervention.
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Figure 3. Fluency as measured in words read per minute during baseline and intervention.
Figure 4. Comprehension as measured by the number of story elements included in a retelling during baseline and intervention.