Word Learning in Predictable Text

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Abstract:
Predictable text has become widely used for beginning readers but has not been the subject of much research. This study used predictable books to compare 3 reading treatments reflecting different components of a whole-to-part instructional model. In 3 first-grade classrooms, beginning readers working with isolated words in a modified word bank activity learned more words than when they worked with sentence strips. They also learned more words using sentence strips than when they simply read and reread the books. There was a significant treatment effect, justifying the theoretical position that beginning readers learn more words when those words are removed from the supportive context offered by predictable text. Students with higher levels of literacy skill learned 5 times as many words as those with lower levels. The overall number of words learned in these predictable books appears limited. These findings have important implications for the use of texts in beginning reading programs.

Article:
There has been a revolutionary shift in the materials and methods used with beginning readers in the last few years. This shift is reflected in the first-grade materials offered for adoption by major basal publishers (McCarthey et al., 1994). Predictable literature is replacing the traditional controlled text of preprimer stories, which were designed to carefully build up a beginner's sight words by limiting the vocabulary to high-frequency or phonetically regular words and to repeat those words in a cumulative fashion (Chall, 1967). In addition, the shared reading approach (Holdaway, 1979) is replacing the long established directed reading lesson (Betts, 1946).

Advocates of predictable text believe that it enables beginners to feel successful in their earliest attempts to read (Heald-Taylor, 1987; Rhodes, 1981). Word recognition is supported by the illustrations, by patterned repetitive language, by rhythm and rhyme, and by the child's ability to anticipate and quickly memorize the language. In a shared reading lesson, the story is read to the children, and they join in chorally before they are expected to read it independently. Word recognition depends less on cumulative mastery of reading vocabulary or decoding skills and more on memory of the text and the use of contextual strategies (Bridge, Winograd, & Haley, 1983; Rhodes, 1979). Beginning readers can engage in reading-like behaviors, which over time more closely approximate real reading, whereas continued exposure to words in a meaningful context is expected to facilitate word learning (Bridge, 1986).

Predictable Text Research
Although predictable reading materials have gained widespread popularity, they have not been studied much. The most frequently cited study is that by Bridge, Winograd, and Haley (1983). They compared word learning in two matched low-ability reading groups of first graders after 4 weeks of instruction. Eight children in the control group used basal preprimer materials under the direction of their regular classroom teacher, who

followed the activities outlined in the teacher's guide. The experimental group read in predictable trade books and from dictated stories. Follow-up activities for the experimental group were designed to "ensure that the children would attend to the graphophonic characteristics of the individual words" (Bridge et al., 1983, p. 887). These included reading the text from a chart and matching sentence strips and word cards to the chart. Posttesting revealed that the students in the experimental group could recognize significantly more target words in isolation ($M = 40.8$) than the control group ($M = 33.6$).

An earlier study was similar, except that it focused on low-achieving kindergarten children (Bridge & Burton, 1982). The mean acquisition of target words in the experimental group was slightly higher ($M = 3.9$) than in the control group ($M = 3.0$), but the difference was not significant. At best, predictable books were at least as good as basals for sight–word acquisition.

Although Bridge's (Bridge & Burton, 1982; Bridge et al., 1983) two classroom-based studies were designed to compare word learning in predictable text with word learning in basal text, the associated methods were confounded with other variables in these studies. For example, follow-up instruction in the first-grade experimental group included word level activities that were not included with the basal instruction. In the kindergarten study, there seemed to be more word level activities in the basal condition. The amount of time spent in repeated reading and follow-up activities may account for differences in word learning, but this is not reported in either study.

Teaching Methods

Materials and methods both need to be considered in any study of the effectiveness of an approach to beginning reading. Three methods commonly associated with beginning reading and word learning are *repeated readings*, *whole-to-part activities*, and *word bank activities*.There are certainly more, but these three all begin with the use of meaningful text and therefore are in line with current practices.

Repeated readings are well established among practitioners. Teachers have asked beginning readers to read and reread the same materials to strengthen word recognition, speed, expression, and comprehension. The formal method of repeated readings has been investigated frequently since Samuels (1979) and Chomsky (1976) first introduced it. Its value in enhancing fluency has been established in a number of studies (see, e.g., Dowhower, 1987; Herman, 1985; Rashotte & Torgesen, 1985; Shaney & Biemiller, 1995). Fast and accurate word recognition, which supports fluency, is apparently facilitated as students encounter words repeatedly in the same context. However, no studies could be found featuring beginning readers using predictable text.

Whole-to-part activities commonly associated with predictable material have been described by a number of reading educators (Bridge, Winograd, & Haley, 1983; McClure, 1985; Rhodes, 1981; Tierney, Readence, & Dishner, 1990). After reading the whole text together, students work with sentence strips and word cards while their attention is directed to words, letters, and sounds. Some of these activities have long been associated with the language experience approach (LEA), but credit is also due to the shared reading activities suggested by Martin and Brogan (1971), Holdaway (1979), and the McCrackens (1986). Word learning appears to be facilitated as children examine sentences and words in the absence of illustrations or textual sequence.

Word banks are personal collections of self-selected known words. Of all the LEA classrooms compared in the first-grade studies (Bond and Dykstra, 1967), those involving word banks, under the guidance of Stauffer (1970), achieved the greatest gains in word recognition. Word bank activities remove words entirely from a printed context, leaving young readers with no support for recognition except for the graphophonic information provided by the letters themselves. There appears to be good evidence that beginning readers process words more completely when they are examined in the absence of context.

Studies Related to Context Versus Isolation

Experimental studies comparing sight–word acquisition in context versus isolation offer converging evidence that examining words in isolation enhances word learning (Ehri & Roberts, 1979; Ehri & Wilce, 1980; Nemko,

1984). In the earliest of these studies, first graders trained to read 16 words on flashcards demonstrated faster word recognition and more complete orthographic retention than those trained in meaningful sentences. Ehri and Wilce found similar results in a study of kindergarten children reading function words in isolation versus a sentence context. They concluded that sentence readers were propped up by context, but since context required only limited processing of the print, the sentence readers did not remember much orthographic information.

Illustrations also provide contextual support. The role of illustrations on printed word learning was a topic of interest during the sixties and seventies and resulted in a number of studies (see Ceprano, 1987, for a review). The best known work is that of Samuels (1967; Singer, Samuels, & Spiroff, 1974), who conducted a series of experiments in which he compared word learning in conditions where pictures were present with conditions in which single words and text were presented without pictures. He summed up these findings in his focal attention theory, which states that "picture and context cues deter acquisition of reading responses because they enable the child to identify the word in practice without focusing on its graphic features" (Singer, Samuels, & Spiroff, 1974, p. 555).

Goals of This Study
The evidence cited above raises questions about how well predictable reading materials may facilitate word learning because of the supportive context offered by memorable patterned language and illustrations. However, instructional activities used with these (or any) materials may have a significant effect on word learning. To investigate this possibility, I designed the present study to compare three activities: rereading familiar text, working with sentence strips, and using a modified word bank approach. These three were selected as experimental treatments because they provide a test of the theoretical whole-to-part instructional model that involves a range of processing demands on the beginning reader. Word learning might be enhanced by removing some or all of the supportive context after words are first introduced in a meaningful whole text. The whole-to-part model is widely popularized but has not been the subject of research. I hypothesized that the best word learning would take place under conditions in which contextual support was minimized and a greater degree of attention to details of the print was required to carry out the task. I was also interested in whether students with varying degrees of literacy achievement would benefit differentially from the experimental treatments.

Method
Participants and Setting
Three first-grade teachers at a public school in a small city in the middle atlantic states serving primarily low- and middle-income families agreed to participate in this study, and their students became the participants ($N = 56$). One of the teachers was in her 2nd year of teaching, and the other two each had over 20 years of experience. All three had reputations in the school as excellent teachers. Twenty-three of the students were White and 33 were of African American or mixed racial heritage. There were equal numbers of boys and girls.

Prior to the study, all of the students were individually administered a battery of tasks adapted from the Early Reading Screening Instrument (ERSI; Morris, 1992) to assess their literacy achievement in print skills. The tasks include alphabet naming (both capital and lowercase), concept of word in print (ability to track and identify words in memorized text), phoneme awareness as measured through a spelling inventory as well as an initial consonant picture sorting task, and word recognition on preprimer, primer, and Wide Range Achievement Test—Revised (WRAT–R; Jaskak & Wilkinson, 1984) word lists. The results of this assessment were used to compare the three classes to confirm that none of the students were beyond the beginning reading stage (preprimer basal level), and to form three post hoc groups to examine the interaction of the treatments with level of reading achievement.

Materials
The nine predictable books used in this study were from *StoryBox in the Classroom: Stage 1* (1990), a collection of short paperback books for beginning readers. The books correspond in difficulty to preprimer materials, as described by Reading Recovery guidelines (Peterson, 1991). Three books were used each week

with all students, as summarized in Table 1. The books used each week were roughly equivalent in terms of the total number of different words but had few words in common. The two or three words that occurred in more than one book each week (such as *the*, *they*, *for*, etc.) were dropped from the data analysis. In their reading of three books each week, the children were exposed to between 41 and 66 unique words, for a total of 160 words across 3 weeks.

Table 1
Experimental Design and Book Titles for Week 1 of the Study

Class	Repeated readings	Sentence context	Word bank
A	1. *Silly Old Possum*	2. *Monster Sandwich*	3. *One, One is the Sun*
B	2. *Monster Sandwich*	3. *One, One is the Sun*	1. *Silly Old Possum*
C	3. *One, One is the Sun*	1. *Silly Old Possum*	2. *Monster Sandwich*

Note. This design was repeated each week. In Week 2, the books were 1. *Stop*, 2. *Little Pig*, and 3. *Sleeping Out*. In Week 3, the books were 1. *Look for Me*, 2. *Danger*, and 3. *Dan, the Flying Man*. All are from the *StoryBox in the Classroom: Stage I* (1990).

Treatments

Each week, all three books were introduced to all students in the same shared reading approach on the 1st day of a 4-day plan. For each of the three books, the teacher led a brief discussion of the title and cover, read the book to the group, asked the group to read along with her in their own copies (two times), and then asked them to read it alone. Students were encouraged to point to words as they read and were given corrective feedback when they named a word incorrectly. On subsequent days, each book was used in connection with a different treatment, depending on the teacher. The entire text of each book was read a total of 10 times in each treatment. Four of these readings were done chorally and 7 individually. Every effort was made to equalize across treatments the amount of time spent attending to print. The treatments are described briefly here and in more detail in the appendix.

1. *Repeated readings treatment* (*RR*). Books used in the RR were read 10 times over a 4-day period, always in the original context. During some of these readings, the students took turns participating in brief dramatic interpretations of the texts. One or more children acted out the story using stick puppets and storyboards while the others took turns reading aloud.
2. *Sentence context treatment* (*SC*). After chorally reading the book again on the 2nd day of the SC, the students read the text on a chart without the support of pictures and then worked together as a group to rebuild the story using large sentence strips. On the 3rd and 4th days, after rereading the story individually in context, they worked with their own set of small sentence strips to rebuild the story.
3. *Word bank treatment* (*WB*). On Days 2 and 3 of the WB, after reading in context, the children were given individual, one-page, unillustrated copies of the story to read to themselves, and they were directed to underline known words. Words children could identify were given to them on small cards to add to their personal collection. On the 4th day, they again read the story but also reviewed the words in their own word bank. Word banks were collected at the end of each week, and children did not review words other than during the instructional time or from one week to the next. Students had between three and eight words in their banks at the end of each week.

Measures

Each week, students were pretested with a random list on all the words they would see in the predictable texts during the upcoming week. They were posttested at the end of each week (immediate recall) and again 3 weeks later (delayed recall) using the same form. Words known on the pretest were subtracted from the words identified on the immediate recall and delayed recall tests, leaving only newly acquired words for analysis.

Procedures
Students had been exposed to choral reading, independent reading, and working with sentence strips and word cards during the first months of school. The teachers were supplied with the books and teaching materials as well as checklists to guide them through the activities. The teachers worked with the children in three small homogeneous groups in each classroom, but each group got the same treatment, and the teacher-created groups were not part of the research design. Observations several times a week as well as videotaping during the 2nd and 3rd weeks confirmed that the teachers followed the plans consistently.

The ERSI was individually administered 1 month prior to the study by a reading specialist or me. To begin the study, the students were pretested on all the words contained in the first set of three books. The books were introduced in sets of three to children in small groups. Each book was then used with a different treatment on subsequent days. This meant that the teacher used all three books and treatments during the 30 min allotted to reading instruction for each small group; each treatment lasted 10 min. The teacher repeated the lesson with her other two groups with the same books and treatments, making some minor adjustments for differing degrees of literacy skills. The procedures for the other two classes were the same except that the books and treatments were counterbalanced. The study was then replicated two more times using two other sets of books. See Table 1 for a diagram of the research design and counterbalancing of books and treatments.

Each Friday, the students were posttested (immediate recall) and pretested for the next week by an assistant or me to determine the number of new words acquired in each condition. Students were trained to slide a card down a column of words, looking briefly at each one and naming those they knew. They were discouraged from guessing or making laborious efforts to sound out the words. These beginning readers had not been trained to sound out words in isolation, and in general, they did not attempt to sound out words when reading from the lists. Three weeks after each immediate recall posttest, they were tested on the same words a third time to measure retention (delayed recall). No student mastered all the words by the posttest; therefore, there was little or no ceiling effect.

Results
The results of the initial assessment are reported first, and then the major analysis of the treatment effect is addressed.

Achievement Groups
The initial assessment, which used the modified ERSI, was done for several reasons. The first was to determine whether any of the students were beyond the beginning reading stage. Raw scores were summed and adjusted so that four aspects of literacy (letter knowledge, concept of word, phonemic awareness, and word recognition in list form) each contributed 25% to a possible total of 40 points (see Morris, 1992). A summary of the raw scores for each group is shown in Table 2. The mean total score for the initial assessment was 21.0 with a standard deviation of 7.24. The highest score was 33.9, far from the ceiling of 40. The word recognition portion provided a conventional measure of a child's reading level. No student scored higher than 67% on the preprimer word list (90% is the level of mastery); thus, no students were determined to be beyond the beginning reading stage. An analysis of variance (ANOVA) using ERSI scores established that there were no significant differences between the classes in terms of literacy skills prior to the study.

Table 2
Breakdown of Mean Early Reading Screening Instrument Raw Scores (and Standard Deviations) by Tasks and Achievement Levels

Achievement level	Letter naming and writing			Concept of word		Phonemic awareness		Word recognition		
	Caps (26)	LC (26)	Prod (26)	Point (6)	WRC (6)	Spell (54)	Sort (12)	PP (15)	P (15)	WRAT–R (25)
High (n = 16)	25.9	24.6	25.4	6.0	5.3	29.8	11.9	4.8	2.4	4.8
	(0.3)	(1.2)	(0.8)	(0)	(0.7)	(6.1)	(0.2)	(2.5)	(1.8)	(2.0)
Middle (n = 20)	22.6	20.3	22.1	4.9	3.9	19.1	10.5	0.7	0.8	1.6
	(4.5)	(4.1)	(3.9)	(1.4)	(1.3)	(8.1)	(1.9)	(0.8)	(0.9)	(1.5)
Low (n = 20)	16.0	12.5	13.9	2.8	1.7	5.2	6.4	0.2	0.1	0.2
	(5.3)	(4.9)	(6.2)	(1.8)	(1.8)	(4.2)	(3.3)	(0.4)	(0.3)	(0.4)

Note. Numbers in parentheses next to each task denote maximum scores possible. Tasks of letter knowledge include recognition of capital letters (Caps) and lowercase letters (LC), and a written production of letters (Prod). Concept of word tasks include tracking memorized text (Point) and identifying words in the text (WRC). Phonemic awareness tasks include identifying the number of letter–sound matches in words called aloud to spell (Spell) and sorting 12 pictures by beginning sounds (Sort). Word recognition tasks in isolation or in a list form include preprimer words (PP), primer words (P), and the first 25 words from the Wide Range Achievement Test—Revised (WRAT–R; Jastak & Wilkinson, 1984).

The combined initial assessment scores were also used to rank order the students by achievement, and the entire group was divided into three groups of similar size. Students scoring above 27 were designated as the high reading group (*n* = 16), those scoring between 17 and 27 were designated as the middle reading group (*n* = 20), and students scoring below 17 on the ERSI were designated as the low reading group (*n* = 20). These three post hoc groups across three classes became the units of analysis, resulting in nine comparison groups. These groups were used to address the question of whether students profited differentially from the treatments on the basis of the level of their print-related skills.

Major Analyses
The first analysis examined whether there were any order effects on word learning by treatment and teacher or by treatment and book. A repeated measures ANOVA with two within-subjects factors (treatment: RR, SC, and WB; time of recall: immediate and delayed) and two between-subject factors (teacher: A, B, and C; type of book: 1, 2, and 3) revealed no interactions for teachers by treatment, $F(2, 8) = 3.56$, $p = .06$, or by books and treatment, $F(2, 8) = 1.61$, $p = .26$.

Table 3 presents immediate and delayed recall of words across treatments for the entire sample as well as for high, middle, and low achievers. As noted, the means for the sample increased for both immediate and delayed recall, with the repeated readings having the lowest mean value (1.18), followed by the sentence context (1.87) and word banks (2.62). Moreover, this ascending profile represented the mean values for the high, middle, and low achievers in every immediate recall comparison and in one of the three delayed recall comparisons.

Table 3
Means and Standard Deviations for Immediate and Delayed Recall of Words for Repeated Readings (RR), Sentence Context (SC), and Word Bank (WB) Treatments

Achievement level	Immediate recall			Delayed recall		
	RR	SC	WB	RR	SC	WB
High (n = 3)						
M	2.06	3.22	4.86	1.72	2.06	3.23
SD	0.77	0.59	1.33	0.76	0.05	0.74
Middle (n = 3)						
M	1.06	1.85	2.01	0.71	1.49	1.29
SD	0.86	1.40	1.15	0.45	1.10	0.52
Low (n = 3)						
M	0.43	0.53	0.98	0.30	0.29	0.72
SD	0.08	0.61	0.49	0.11	0.41	0.49
Total (n = 9)						
M	1.18	1.87	2.62	0.91	1.28	1.75
SD	0.92	1.42	1.97	0.77	0.98	1.25

The main analysis, a repeated measures ANOVA with two within-subjects factors (treatment: RR, SC, and WB; time of recall: immediate and delayed) and one between-subjects factor (achievement: high, average, and low) revealed main effects for achievement, $F(2, 12) = 10.99$, $p= .009$, time of recall, $F(2, 12) = 30.12$, $p= .002$, and treatment, $F(2, 12) = 11.71$, $p= .002$. Each main effect was represented in a two-way interaction involving time of recall by treatment, $F(2, 12) = 6.21$, $p= .01$, and time of recall by achievement, $F(2, 12) = 5.48$, $p= .04$. The three-way interaction was not significant.

For the time of recall by treatment interaction, simple effects tests were conducted between treatments for the immediate and delayed recall posttests ($p< .05$). As depicted in Figure 1, consistent with my hypotheses, for both immediate and delayed recall tests, students learned the most words in the WB, followed by SC and then RR. This profile remained across the immediate and delayed recall assessments (see Table 3).
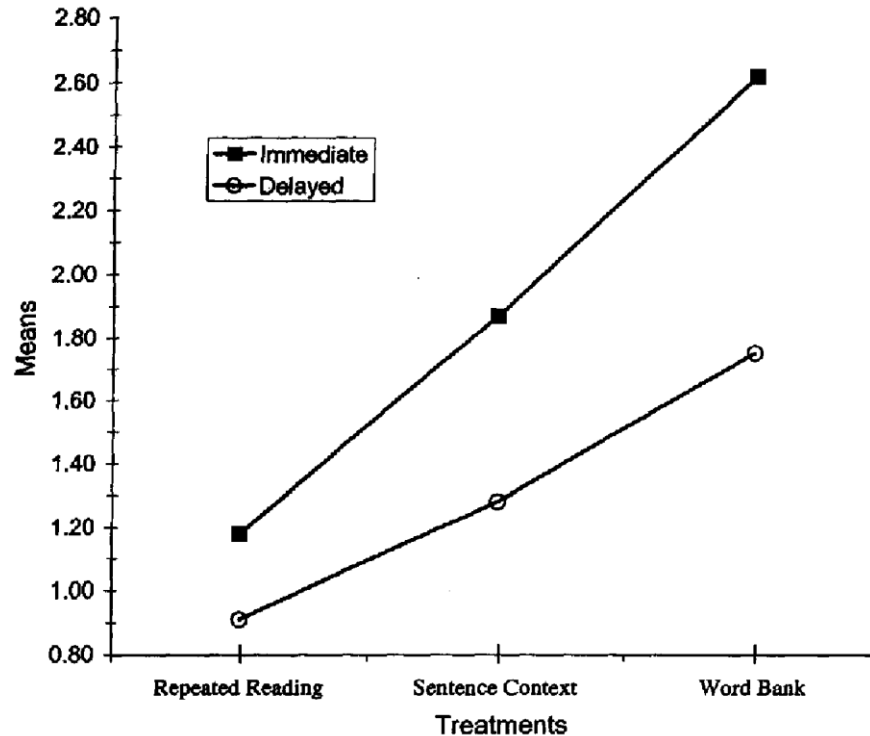

Figure 1. Beginning readers' immediate and delayed word-learning means in three treatments using predictable books.

For the time of recall by achievement interaction, significant differences existed among all three groups for the delayed recall condition and between high and low achievers and high and average achievers for the immediate recall condition (Student-Newman-Keuls, $p < .05$). Thus, most differences were predictable in that high achievers generally outperformed average achievers who, in turn, scored higher than the lowest achievers. To further explore this interaction, I examined the number of words recalled by the high, average, and low achievers. Whereas students in each achievement group learned the most words in the word bank condition, the highest achievers learned approximately five times more words across all three conditions than the lowest achievers and twice as many words as the middle achievers. For example, high achievers learned an average of 10.14 words each week across all three treatments, as shown on the immediate recall test (2.06, RR + 3.22, SC + 4.86, WB = 10.14), whereas middle achievers learned an average of 4.92, and low achievers learned only 1.94. The delayed recall test showed a similar profile (7.01, 3.49, and 1.31, respectively).

To summarize, in terms of word learning, the WB proved superior to the SC, which in turn produced greater results than did the RR. Overall, students with higher levels of print skills prior to the study learned five times as many words during the study as students with lower levels of print skills.

Discussion

The major purpose of this study was to test whether beginning readers' word learning in predictable text is enhanced when they participate in activities that provide varying levels of support in a whole-to-part instructional model. The results support this hypothesis.

In the RR, little attention to the printed forms of the words is required. Readers need only attend to minimum print cues to accurately track the simple and familiar patterned language of the text. Minimum print cues, however, do not provide enough information to sustain the identification of words in isolation (Ehri, 1992; Juel, 1991). Ehri and Sweet's (1991) study of fingerpoint reading led them to conclude that word learning by novice readers was negatively affected by the "greater salience of other non-print cues such as the pictures, and the absence of pressure to process print cues because the text had been memorized" (p. 455). These same factors appear to account for the limited word learning in the RR described in this study.

In the SC, children still had the support of memory and context, but the sentences were randomly presented and there were no illustrations. This treatment, therefore, required more careful attention to the print than the RR, and children learned significantly more words than when they merely read and reread the original text. The lack of illustrations (Ehri & Sweet, 1991; Singer, Samuels, & Spiroff, 1974) may account for the enhanced word learning in this condition and the task of reordering sentences presented in an unfamiliar sequence.

The most word learning occurred in the word bank treatment where words were eventually removed from context and illustrations. This required students to rely entirely upon graphophonic cues. Experimental studies described earlier also found that word learning in isolation was better than in context (Ehri & Roberts, 1979; Ehri & Wilce, 1980; Nemko, 1984). Adams (1990) explained this phenomenon in this way: "Where context is strong enough to allow quick and confident identification of the unfamiliar word, there is little incentive to pore over its spelling. And without studying the words' spelling, there is no opportunity for increasing its visual familiarity" (p. 217).

Word learning can be thought of in psychological terms as the retention of stimuli (in this case the spelling or printed form of a word), which is a function of the depth to which the stimulus has been analyzed. Retention depends on the amount of processing and the extent to which participants have developed systems to analyze particular types of stimuli (Craik & Lockhart, 1972). To deal with the print accurately, each of the treatments in this study required different degrees of processing depth.

After conducting two studies involving word learning, Bridge (1986) concluded that "children spontaneously begin to develop a sight vocabulary as a result of repeated exposure to the vocabulary words in dependable context" (p. 83). In the present study, children did learn words from repeated reading, but they learned more words when that context was diminished or removed. Bridge went on to recommend a series of lessons to "ensure that the children attend to the visual characteristics of the words" (p. 84). These follow-up, part-to-whole activities have not been tested previously, but they made a significant difference for the first graders in this study.

Achievement Differences

This study also examined how children with varying degrees of literacy achievement benefited from the different treatments. Although the WB produced the most word learning in all three achievement groups, it favored the high group, where students learned approximately five times more words than the lowest group and twice as many as the middle group.

Craik and Lockhart (1972) theorized that retention of stimuli depends not only on processing depth, as discussed earlier, but also on the extent to which a system has been developed to analyze such stimuli. Ehri (1992) has described how letter knowledge and phonological awareness facilitate the development of a system for the storage and retrieval of sight words and the different phases that characterize this development.

Achievement differences in word learning in this study may be best understood in terms of how well developed this system is in children with varying degrees of literacy. Many of the students in the low group had not yet mastered a majority of lowercase letters and were not able to consistently sort pictures by initial sound or represent sounds in a spelling task. The relationship of alphabet knowledge and phonological awareness with overall progress in beginning reading is well established (e.g., Bond & Dykstra, 1967; Juel, Griffith, & Gough, 1986; Share, Jorm, Maclean, & Matthews, 1984) and here too it may account for the wide variability in word learning.

Word Learning in General
Overall word learning in this study seemed low, with a weekly mean across all achievement groups of no higher than 5.67 words when summed across all three conditions. There is little normative data about the rate at which young readers acquire words, but the year-long study of basal reading instruction by Juel and Roper/Schneider (1985) offers some possibility for a comparison. Beginning readers, described as average, appeared to be learning about 18 words a week during the first 12 weeks of school (Johnston, 1995). In contrast, the highest achieving readers in this study were learning, at best, an average of 10.14 words a week.

Implications for Classroom Practice
Predictable reading materials offer a number of advantages. They support young readers' earliest attempts to read by reducing the need for extensive word recognition through patterned repetitive language that is easy to anticipate and remember. Yet these very advantages may not work to facilitate the acquisition of words that can be used to support the readers' efforts in the nonpredictable materials they will encounter as they grow as readers. The tension between contextual support on the one hand and attention to print on the other is one that teachers must maintain as they work with beginning readers. Context dependency, which persists beyond early first grade, may be cause for concern (Biemiller, 1970). Only the word recognition of beginning readers and poor readers benefits from the extensive use of context (Nicholson, 1991; Stanovich, 1986). Teachers who use the shared reading model and predictable reading materials should be vigilant in making certain that word level tasks that demand attention to graphophonic cues are included.

Even a modified word bank activity, such as that used in this study (words did not accumulate from week to week), produces significantly more word learning than merely reading and rereading a predictable text. A word bank in which words accumulate and are reviewed over a longer period of time may have an even more powerful effect on word learning. In the absence of cumulative word review in current first-grade reading materials, word banks can supply the continued exposure students need.

First-grade teachers should consider these recommendations: (a) Introduce beginning readers to new words in the meaningful and supportive context offered by predictable text; (b) after several readings, remove the support of pictures and direct students' attention to individual words in and out of context; (c) examine words in isolation and review known words regularly; and (d) move toward the use of less predictable text as students show evidence that they can read such material independently.

Questions still remain as to whether predictable text itself is problematic given the limited word learning of even the highest achievers in this study. However, word learning is only one goal of beginning reading, and other goals are well served by predictable text. Predictable text may be the very best choice of materials for children in the earliest stage of reading, but more studies are certainly needed and should examine the array of understandings, attitudes, and skills related to its use.

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APPENDIX
APPENDIX A: Experimental Treatments

- Day 1—Teacher introduces book and reads story to the group. Children choral read twice with the teacher, using their own book. Children then read the story alone with support as needed. (2 choral readings and 1 individual reading)
- Day 2—Teacher leads children in choral reading and then children read the story alone. Children read chorally while teacher acts out the story with stick puppets or simple props. (2 choral and 1 individual)
- Day 3—Children read the story alone. Half of the children have a turn at acting out the story using puppets or props while other half read aloud, taking turns reading individually. (2 individual)
- Day 4—Children read story alone. Second half of children have a turn at acting out the story while other half read aloud, taking turns reading individually. (2 individual)
- Day 5—Students posttest on all the words they've encountered during the week and pretest on words they will see in the following week.
- Day 1—Teacher introduces book and reads story to the group. Children choral read twice with the teacher, following along in their own books. Children then read the story alone with support as needed. (2 choral and 1 individual)
- Day 2—Teacher and children choral read in books. Children choral read the story on a large chart. Children read the story again as they rebuild it with large sentence strips as a group. (2 choral and 1 individual)
- Day 3—Children read the story in the book. Children work individually with small sentence strips to rebuild the story. (2 individual)

- Day 4—Children read the story in the book. Children rebuild the story individually once more with small sentence strips. (2 individual)
- Day 5—Students posttest on all the words encountered during the week and pretest on words they will see in the following week.
- Day 1—Teacher introduces book and reads story to the group. Children choral read with the teacher in own books. Children choral read a second time. Children read the story alone. (2 choral and 1 individual)
- Day 2—Teacher and children choral read in books and then in individual copies of the story. Children read individual copies alone and underline known words. The teacher tests children on underlined words and gives out word cards for words identified. (2 choral and 1 individual)
- Day 3—Children read the book and copies of the stories. They review the word bank by attempting to name each word and referring back to the book for any unknown words. They are given additional cards for words they can identify. (2 individual)
- Day 4—Children read the story in the book. They review their word bank as described for Day 3 and participate in brief word search activities directed by the teacher. Students are told to lay out all their words and find words that corresponded to clues given by the teachers, such as "Who has a word that starts with a *b?*" "Who has a word that rhymes with *can?*" and "Who has the word *possum?*" (2 individual)
- Day 5—Students posttest on all the words encountered during the week and pretest on words they will see in the following week.

Note. Word banks were available only during reading group time and were collected on the last day of each week. They did not accumulate across weeks, as would be done in normal word bank practice.