Vocabulary acquisition of target words by second grade students through storybook read-aloud sessions

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VOCABULARY ACQUISITION OF TARGET WORDS BY SECOND GRADE STUDENTS THROUGH STORYBOOK READ-ALOUD SESSIONS

by

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A Thesis

Submitted in partial fulfillment of the requirements of the Master of Science in Teaching Degree in the Graduate Division of Rowan University

July 3, 1997

Approved by

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Date Approved: July 3, 1997
ABSTRACT

JoAnn Ulbrich, Vocabulary Acquisition of Target Words by Second Grade Students Through Storybook Read-Aloud Sessions, 1997, Dr. Randall Robinson, thesis advisor, Rowan University Master of Science in Teaching Elementary Education.

The effects of three conditions of vocabulary presentation were examined to determine which method is optimal for vocabulary acquisition of the meanings of unfamiliar words in elementary school students. The design of this study was similar to that used by A. Brett, L. Rothlein, and M. Hurley (1996). Three intact classes of second grade students, N = 59, in a suburban area in Southern New Jersey were randomly assigned to a control group, a group where students received no explanations of target words when they were read a storybook aloud, or a group where students received brief explanations of target words when they heard a story read aloud. Pretests, posttests, and retention tests were used to acquire measures of amount learned or amount lost with regard to the vocabulary words. A one-way Analysis of Variance and post hoc Tukey's HSD and Scheffe's Test comparisons, p = .05, revealed students who received explanations of target words during the read-aloud session learned significantly more than students who were not given explanations or students who were not exposed to the storybook. A one-way Analysis of Variance, p = .05, of the amount lost revealed no significant differences in the amount of retention between the three groups.
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MINI-ABSTRACT

JoAnn Ulbrich, Vocabulary Acquisition of Target Words by Second Grade Students Through Storybook Read-Aloud Sessions, 1997, Dr. Randall Robinson, thesis advisor, Rowan University Master of Science in Teaching Elementary Education.

Three conditions of vocabulary presentation were examined to determine effective methods for vocabulary acquisition in elementary school students. Findings revealed students receiving explanations of target words during a read-aloud session learned significantly more than students not given explanations or students not exposed to the storybook. No significant difference in the amount of retention between the three groups was found.
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Chapter One
The Scope of the Study

Introduction

Reading to children has become a widely accepted and a valued practice for parents (Greaney, 1986) and educators (Hoffman, Roser, & Battle, 1993). In a survey of 183 elementary school teachers it was found that over 70% of them read aloud to their students for 20 minutes every day and "the remaining 28.5% reported reading aloud 10 to 15 minutes daily or 15 to 30 minutes, 2 to 4 times a week." (Lickteig & Russell, 1993, p. 203). Numerous benefits have been evidenced from such read-aloud practices. Some of the benefits include higher overall achievement, increased appreciation for literature, growth in vocabulary, and improved listening and comprehension skills (Greaney, 1986; Lickteig & Russell, 1993; Whitehurst, Falco, Lonigan, Fischel, DeBaryshe, Valdez-Menchaca & Caulfield, 1988; Fondas, 1992; Frick, 1986).

Furthermore, as cited by Moss (1995), "...Becoming a Nation of Readers asserts that reading aloud is the single most important activity for creating the background necessary for eventual success in reading" (p. 122).

Because the technique of reading aloud is widely used and accepted, researchers are constantly contributing new information on strategies and their perceived benefits. Vocabulary acquisition from read-aloud practices is one area in which research is being done (Elley, 1989; Robbins & Ehri, 1994; Senechal & Cornell, 1993; Senechal, Thomas & Monker, 1995). Research has demonstrated that knowledge of vocabulary is important to many aspects of education. It has been estimated that elementary school children learn an average of 4,000 words per year (Brett et al., 1996, p. 415). Vocabulary growth has been
strongly linked to reading comprehension (Peitz & Vena, 1996; Reutzel, Hollingsworth, & Eldredge, 1994), language acquisition of non-English speaking children (Hasting-Gongora, 1993; Elley, 1989), and decoding and inferencing skills (Frick, 1986). Since reading aloud to children has been associated with vocabulary gains (Brett, Rothlein, & Hurley, 1996; Elley 1989; Robbins & Ehri, 1994; Senechal & Cornell, 1993), it follows that future research should focus on the most efficient means of presenting stories and vocabulary to students to foster optimal vocabulary growth.

In this study vocabulary acquisition was measured after reading a storybook aloud to second grade students in different ways. The purpose was to determine which condition was most conducive to learning meanings of new words.

**Significance of the Study**

A strong correlation has been found between vocabulary and academic achievement (Gauthier, L.R., 1991). It is important to determine under what conditions elementary students can learn new words most effectively. This study examined the acquisition of new vocabulary words by second grade students. Three second grade classes were given different presentations of new vocabulary words in the context of a storybook that was read aloud one time. The primary consideration of the study was whether or not second grade students needed explanation of new words in order to learn their meanings.

**Statement of the Problem**

Read-aloud practices have been found to enhance vocabulary. Vocabulary knowledge offers students many advantages, therefore, techniques for the successful development of such vocabulary gains must be investigated further. Specifically, under what conditions of presentation of new vocabulary words during read-aloud sessions do second grade
students learn the meanings most frequently? This study examined whether the students would learn words incidentally by hearing them in the context of the story, or if these words would need to be accompanied with some explanation in order for learning to take place. Furthermore, it examined whether learning vocabulary through a single read-aloud session would be permanent or temporary.

Statement of the Hypothesis

It was hypothesized that there would be no significant difference between the acquisition of target words by second grade students who received explanations of target words while a storybook was being read aloud and the acquisition of target words by second grade students who did not receive explanations of target words while a story was being read aloud.

Limitations of the Study

Several limitations were apparent in the design of the study.

1. The sample used was taken from only one elementary school and is not a truly random sample. Random sampling is the best way to achieve a sample that is truly representative of the population (Gay, 1996). It is questionable whether the sample of second grade students in this school is representative of a larger population of second grade students.

2. Some of the students who participated initially had to be dropped from the study because of absence during one or more of the research sessions. Since larger sample sizes are more likely to represent a population (Gay, 1996), the additional data would have been beneficial to the study.

3. Of the three second grade classes that participated, one of the classes was familiar with the researcher conducting the tests, which may have reduced test anxiety within that group.

4. The study used only one storybook and ten target words. It is questionable as to whether these findings would generalize to different stories and vocabulary words.
A design that incorporated several trials with different books and words may have clarified this question.

5. The researcher could not control whether or not students had heard the story before outside of class. If students had heard the story before they would have had additional exposures to the words and therefore may have had an advantage in the testing condition.

6. No baseline data was taken to determine prior knowledge and level of vocabulary development in the students. It is possible that students with different levels of vocabulary development learn words best in certain ways. This possibility suggests that a group of students could have been put at an advantage or disadvantage of which the researcher was unaware.

7. Because the researcher created the tests that were administered to the participants, there were no reliability or validity scores available. The tests were not piloted before the study. It is possible that these tests were not an appropriate measure of vocabulary acquisition. Piloting the tests would have generated some data on the consistency of the measurement device.

8. Since the items on each of the three tests administered were identical, although varied in sequence, it is possible that some learning occurred from test familiarity and pretest/posttest interaction effects.

**Definition of the Terms**

The following is a list of the operational definitions that were used for this study:

**Amount Learned** - the amount of vocabulary acquisition that has occurred as measured by the increase in a score from the pretest to the posttest (amount learned score = posttest score - pretest score).

**Amount Lost** - the amount of forgetting that has occurred as measure by the decrease in a score from the posttest to the retention test (amount lost score = posttest score - retention test score).

**Explanation of Target Words** - a brief explanation of the meaning of target words using a synonym or a short phrase.

**Posttest** - a variation of the pretest administered to all subjects in groups A and B immediately following exposure to the story and administered to all subjects in group C during session two.
Pretest - a 15-item multiple choice test containing 10 target words and 5 words assumed to be known by all subjects which was administered to all subjects in each group prior to any exposure to the story.

Read-Aloud Session - a 10 to 15 minute session where students gathered around the researcher in a story circle and listened quietly as the researcher read the story aloud.

Retention - remembering of words from the posttest to the retention test demonstrated by a small amount lost score.

Retention Test - a variation of the pretest and immediate posttest administered to all subjects in groups A and B one week after exposure to the story and administered to all subjects in group C during session three.

Target Words - words selected from the story that were chosen to examine for vocabulary acquisition. Selection of the words was based on the assumption that second grade students would be unfamiliar with the meanings of the words.

Vocabulary Acquisition - the demonstration that learning occurred based on a significant increase in the mean of scores from the pretest to the posttest.
Chapter Two
Review of Related Literature

Introduction

Research has demonstrated a positive relationship exists between academic achievement and vocabulary knowledge (Gauthier, 1991). It would be valuable to educators to know under what conditions vocabulary acquisition is most likely to occur. More specifically, what type of presentation of vocabulary word meanings is necessary when students are listening to a story read aloud? Research in the area of vocabulary acquisition through read-aloud sessions has focused on several different strategies and has shown contradictory findings. Previous research has been concerned with active participation on the part of the learner, incidental learning of vocabulary words through read-aloud practices, the need for the instructor to facilitate learning of new words through explanation, and the number of readings optimal for vocabulary acquisition.

Vocabulary

The area of vocabulary development has been the subject of much research. Vocabulary is an important aspect of the educational experience and influences academic development in a variety of ways. Well developed vocabularies in which students demonstrate clear understanding of word meanings have been shown to enhance oral and written communication and enrich the reading experience (Kolich, 1988). A strong relationship exists between vocabulary knowledge and reading comprehension. William Nagy states: "Vocabulary knowledge is fundamental to reading comprehension" and "...a reader's general vocabulary knowledge is the single best powerful predictor of how well
that reader can understand text" (1988, p.1). Furthermore, factor analytic research has shown vocabulary knowledge to be the largest element common to nine other reading factors (Weiss, Mangrum & Llabre, 1986). In a study of effective schools Hallinger and Murphy (1985) discovered the most effective schools focused closely on reading development. By creating an environment rich with literature that promotes reading among the students these schools were successful in fostering great reading accomplishments. Because vocabulary development is closely related to reading achievement (Nagy, 1988) and reading achievement is related to academic success (Moss, 1995) the manner in which vocabulary is best developed is worthy of investigation.

Interactive Approach

Many educators and researchers believe that vocabulary growth is best fostered by using an approach in which the child is actively participating. In an analysis of research on vocabulary development Blachowicz (1985) found the more successful studies used methods in which students were actively involved in constructing the meanings of new words being learned. She suggests that this success may be attributed to the “depth of processing” model of memory (Craik and Lockhart, 1972). This model suggests the more an individual works at processing stimuli the greater the retention of the stimuli information will be. Blachowicz and Fisher (1996) identify stressing learner involvement as a key factor in effective vocabulary development. After their examination of research on vocabulary instruction they listed several suggestions for educators. They state students learn new word meanings best when they take an active role in relating words to personal experiences and constructing their own meanings for words. Also, students should explore the relationships between the words. Similarly, Anders & Bos (1986) contend that students must “interact with words” (p. 611) and establish relationships
between words before, during, and after reading to acquire a true understanding of their meanings. Jiganti & Tindall (1986) obtained results to support this position in their study of vocabulary growth of fifth grade students. These students showed greater gains in vocabulary when they participated in interactive learning experiences such as group activities and dramatizations. After a study comparing Shared Book Experiences and Oral Recitation Lessons, during which vocabulary words were discussed often and students were actively engaged, Reutzel et al. (1994) concluded that there was no difference in vocabulary acquisition between the subjects in each group. They state, "In both groups, students are encouraged to process the text at deep and meaningful levels, which should result in vocabulary growth" (p. 56). Similarly, in a study of vocabulary acquisition of 4-year-olds during storybook readings, Senechal et al. (1995) discovered that when children were asked to actively respond by pointing to pictures of target words and commenting on the story, more learning of new words occurred.

With regard to reading comprehension Nagy (1985) states that students must produce "in-depth" knowledge of words to improve comprehension. Studies that have incorporated active student engagement as a feature of instruction have shown this method leads to a deeper processing of word meanings. This deeper processing level that students reached positively affected reading comprehension (Dole, Sloan, & Trathen, 1995).

Incidental Learning of Vocabulary

Several researchers have found evidence of incidental learning of vocabulary with little or no active participation by the student, and no explanations of words by the reader. It has been estimated that elementary age children learn an average of 3,000 to 4,000 new words each year (Shu, Anderson & Zhang, 1995). However, it has been concluded that
very little of the vocabulary growth of school children can be attributed to direct instruction (Jenkins & Dixon, 1983). Blachowicz and Fisher (1996) state: “This rapid and large growth suggests that a significant amount of vocabulary learning takes place though incidental or environmental learning, from wide reading, discussion, listening, and media...”(p. 5).

In a study with kindergartners, Robbins & Ehri (1994) read a story aloud and then administered a posttest. Half of the words on the test were target words from the story and the other half of the words did not appear in the story. Even though meanings of the target words were never discussed, children knew significantly more meanings of words that were in the story than those words that were not. This suggests the children acquired the meanings of the new words incidentally by hearing them read in the story. Senechal et al. (1995) found similar results with the 4-year-olds that they studied. Although the children were never given meanings for target words, they responded appropriately when asked to label or point to pictures depicting them. More specifically, even when including conditions in which 4- and 5-year-olds had the opportunities to participate actively, or were given explanations of target words, Senechal & Cornell (1993) found no significant differences in the learning of new words between those children and the children who listened passively. The phenomenon of incidental learning of vocabulary generalized to elementary age children in studies conducted by Elley (1989). Using second grade students as subjects, researchers read a storybook three times and then measured vocabulary acquisition. It was found that even with no explanation of the target words students learned the meanings of these unfamiliar words.

Incidental learning of word meanings also occurred in studies of third, fifth, seventh, and eighth grade students who independently read words within meaningful context (Nagy, Herman, & Anderson, 1985; Nagy, Herman, & Anderson, 1987). These
researchers contend that students learn too many words to learn them all through direct instruction, so they must learn some on their own. They state, "...our results suggest that a most effective way to produce large-scale vocabulary growth is through an activity that is all too often interrupted in the process of reading instruction: Reading" (Nagy et al., 1985, p. 252). They suggest that these results may generalize to younger children if the words are put in the form of meaningful oral context. This meaningful oral context could be in the form of reading aloud to young children and nonreaders (Nagy et al., 1985).

This type of learning appears to be a universal phenomenon (Shu et al., 1995). Researchers studied incidental learning of vocabulary words with fourth and fifth grade students in America and China. They found that both American and Chinese children were able to learn words incidentally through normal reading. In addition, incidental learning did not depend on ability level (Shu et al., 1995). This implies that all children, regardless of ability level, are able to learn words incidentally from context (Shu et al., 1995).

Explanation of New Vocabulary Words

Although some researchers readily accept incidental learning of new vocabulary words through storybook reading, they contend that this learning can be increased when children are provided with brief explanations of target words. Blachowicz (1987) observed six fourth grade reading groups to determine the importance of vocabulary instruction and the form it takes in the classroom. Although vocabulary instruction was observed in several different forms, the researcher determined teachers considered instructional time spent on vocabulary a priority. The two main types of vocabulary instruction observed were determining the meanings of words within the context that they appeared and using definitions or synonyms to more closely examine the new words. In a study examining

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differential effects of different vocabulary presentations. Weiss et al. (1986) found presenting college students with definitions to new words prior to reading enhanced learning of new words. Adding context to the definitions did not, however, have a significant effect on vocabulary acquisition. After examining research literature on vocabulary learning, Kolich (1988) determined the opposite was true. She contends that the most effective way to teach new vocabulary words to students is by using a mixed approach. With a mixed approach, students are provided both definitional and contextual instruction. She believes the definition clues acquaint the student with the new word and when coupled with contextual exposure the meaning is processed at a deeper level allowing it to become usable vocabulary.

With regard to read-aloud sessions, Elley found in several studies with 7- and 8-year olds in the south Pacific Islands and New Zealand "...young children can learn new vocabulary incidentally from having illustrated storybooks read to them..." and "...teachers' additional explanations of unknown words as they are encountered can more than double such vocabulary gains" (1989, p. 184). Conversely, Brett et al. (1996) contend that explanation of target words is a necessity for vocabulary acquisition to occur. They found that fourth grade students who received no explanations of target words showed no significant gains in vocabulary growth, but those receiving explanations did. This finding supports other research that suggests practices in which words are explained and made the focus of discussion to foster vocabulary growth (Reutzler, et al., 1994).

Repeated Readings and Repeated Word Exposure

Another consideration with vocabulary acquisition studies is the number of presentations of the story or exposures to the target words. In many instances stories were read more than once (Senechal et al., 1995; Fondas, 1992; Elley, 1989;
Martinez & Roser discuss several advantages of repeated readings (1985). They found when preschool children 4 to 5 years of age are read stories on several occasions, their quantity and quality of interaction increases, focusing more on details. This indicated an increased depth of processing. Furthermore, they observed that children did not focus on the meanings of words until at least the third reading of the story. Similarly, Robbins & Ehri (1994) found that 5- and 6-year-old nonreaders could learn vocabulary from hearing stories if the stories were read at least twice. Additionally, words that were reoccurring in the stories were learned more frequently. Research suggesting the necessity of repeated exposure to words exists with older students as well. In a study of fifth grade students who read passages independently, researchers concluded that incidental learning can account for some growth in vocabulary but it requires a number of repetitions of the words and those words must be used within a supportive context (Jenkins, Stein, & Wysocki, 1984). Hoffman & Roser (1993) even cite "Rereading Selected Pieces" as an essential contributing element to "model" read-aloud strategies (p. 501).

There is abundant information available on the benefits of repeated readings but very little on the value of single readings of storybooks. In an effort to add to the research literature on vocabulary growth from single readings, Senechal & Cornell (1993) conducted a study with 4- and 5-year-olds. They found that a single reading of a storybook is sufficient for vocabulary growth with or without discussion of the new words. It is questionable as to whether these results generalize to elementary age readers. Also, each child was read to and tested independently. This is not a viable option in a typical elementary school classroom. In a recent study of fourth grade students, Brett et al. (1996) used a single reading in a whole-group setting and obtained significant findings supporting vocabulary acquisition. Furthermore, students who were given brief
explanations of target words during the reading learned significantly more words than students who were given no explanations or those students who were not read the story (Brett et al, 1996).
Chapter Three
Method
Introduction

Reading aloud to children has become a widely accepted practice. It has been recognized as a contributing agent to academic achievement, increased appreciation for literature, growth in vocabulary, and improved listening and comprehension skills (Greaney, 1986; Licktie & Russell, 1993; Whitehurst et al., 1988; Fondas, 1992; Frick, 1986). It has been considered imperative to future success in reading (Moss, 1995). Vocabulary knowledge is also closely related to academic achievement (Gauthier, 1991) and vocabulary gains have been witnessed through read-aloud practices (Elley, 1989; Senechal & Cornell, 1993). However, the best methods for developing vocabulary are still being explored. The purpose of this study was to examine vocabulary acquisition of second grade students through read-aloud practices. The primary consideration was to determine under what type of presentation of unfamiliar words second grade students would learn the meanings of those words most effectively. Do students need explanations of unfamiliar words to understand their meanings, or can they learn these meanings incidentally from hearing them in the context of a storybook?

Subjects

The subjects of this study were enrolled in a public elementary school in a suburban area of southern New Jersey. According to the annual student body composition report the student population was as follows: three hundred and six students were enrolled in the school; 148 were male and 158 were female. The ethnic composition of the student body...
was: forty-eight percent Caucasian, 20% African American, 31% Spanish, and 1% Asian.
The socioeconomic status of the school population could be characterized as lower to middle class as determined by the number of students participating in the free and reduced lunch program. Fifty-one percent of the students received free or reduced lunches.
Students were distributed into heterogeneous grade level groups based on academic ability, gender, ethnicity, behavior, personality, social development, and learning styles. There were 71 students enrolled in three second grade classes. All three second grade classes participated in the study.

Procedure
The design of this study was a variation of that used in a similar experiment with fourth grade students (Brett et al., 1996). The story selected for this study was The Old Woman Who Named Things (Rylant, 1996). All three classroom teachers and the school librarian were consulted on the appropriateness of the story with regard to interest level and difficulty level. Those consulted agreed the story was high interest, contained supportive illustrations and text, and was slightly above the reading level of the children participating so they would be unfamiliar with some of the vocabulary. All three teachers confirmed they had never read the story to their classes. Ten target words were selected from The Old Woman Who Named Things (Rylant, 1996) by the researcher. The target words selected were: sagged, concrete, risk, plumped, chunk, clever, hinges, kennel, beside, and tolerate. A list of these words was then given to the classroom teachers for approval. All the teachers agreed they had neither taught the words in any form of vocabulary instruction and the words were difficult enough to be unfamiliar to the majority of the students.
Each of the three second grade classes was randomly assigned to experimental conditions A, B, or C. Group A students were read the story with explanations of the target words. Group B students were read the story with no explanations of the target words. Group C was the control condition in which students had no exposure to the story. The distribution of students within each group are illustrated in table 1.

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>13</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>Female</td>
<td>10</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Caucasian</td>
<td>11</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>African American</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Spanish</td>
<td>8</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Free Lunch</td>
<td>10</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Reduced Lunch</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Class Total</td>
<td>23</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

The researcher consulted all the classroom teachers about the most appropriate times to schedule sessions for the study. All the teachers agreed that the best time to address the classes would be immediately after lunch, which was storytime. Dates for the study to be conducted were selected and days of the week for participation were assigned based on class schedule accommodations. Group A participated every Thursday for three weeks, Group B participated every Wednesday for three weeks and Group C participated every Friday for three weeks.

In the first session in all three conditions the researcher administered the pretest.
(see appendix A). Students were told that they were being given a word paper to help teachers find out what kind of words second grade students know. They were assured that the paper did not count towards grades and that they should not worry how many they answered correctly or incorrectly. The researcher read the directions and each item aloud to the students. The students each had a copy of the test and circled the most appropriate answer.

In session two students in Group A gathered around the researcher in a story circle and listened to the story read aloud one time. As the target words appeared in the story the researcher stopped and gave a brief description of the word by telling the students a synonym or a short definition. Students were given the posttest immediately following the story read-aloud session (see appendix B). The procedure for the posttest was the same as for the pretest. Students in Group B also gathered around the researcher in a story circle. These students were read the story verbatim and were not given any explanation of the target words. They were also given the posttest immediately following the read-aloud session. Students in Group C (control condition) were not read the story but were given the posttest.

In session three each of the three groups were administered the retention test (see appendix C). The procedure for the retention test was the same as that for the pretest and the posttest. Students were reassured with regard to the test having no bearing on their grades.

Description of the Measurement Instruments

The test items were designed specifically for this study (see appendix D). Three forms of test questions were used. On the first part of the tests each word was given in isolation and students were instructed to draw a circle around the word that means the
same as the underlined word. On the second part of the tests each word was given in a sentence and students were instructed to draw a circle around the word that means the same as the underlined word. On the third part of the tests students were given a sentence with a blank and instructed to draw a circle around the word that best completes each sentence. The researcher added five distractor items to the tests and divided them among the different parts. The classroom teachers agreed all students should be able to answer those items correctly. The three tests consisted of identical items, but the sequence of the items was varied to control for test familiarity and pretest/posttest interaction effects.

At the end of the three-week study pretest, posttest, and retention test scores for all three groups were examined. Data obtained from the measures of the dependent variable, target word acquisition scores, were statistically evaluated using several one-way Analysis of Variance (ANOVA) procedures (p = .05) to determine whether there was a significant difference between the mean scores of the three groups.
Chapter Four
Analysis of the Findings

Introduction

Parents and educators accept reading aloud to children as a useful tool (Greaney, 1986; Hoffman et al., 1993). Read-aloud practices have been linked to higher academic achievement, increased appreciation for literature, growth in vocabulary, and improved listening and comprehension skills (Greaney, 1986; Lickteig & Russell, 1993; Whitehurst et al., 1988; Fondas, 1992; Frick, 1986). Research has demonstrated read-aloud practices can contribute to vocabulary gains (Elley, 1989; Senechal & Cornell, 1993) and vocabulary knowledge is related to academic achievement (Gauthier, 1991). The purpose of this study was to examine vocabulary acquisition of unfamiliar words in three classes of second grade students through the use of different read-aloud techniques. It was hypothesized that there would be no significant difference between the acquisition of target words by students who received explanations of target words while a storybook was being read aloud and the acquisition of target words by students who did not receive explanations of target words while a story was being read aloud.

Results

The scores for the pretest, posttest, and retention test were obtained by scoring one point for each correct answer. There were fifteen items on each test. The amount learned scores were calculated for each subject by subtracting the pretest score from the posttest score to illustrate the gain or loss from the pretest to the posttest. The amount lost scores were calculated for each subject by subtracting the retention test score from the posttest.
score to illustrate the gain or loss from the posttest to the retention test taken after a one-week interval. An examination of the means and standard deviations of the scores for all three groups of students revealed increases from the pretest to the posttest and decreases from the posttest to the retention test. To further illustrate these gains and losses, the means and the standard deviations for amount learned and amount lost scores were calculated (see table 2).

**Table 2**

**Means and Standard Deviations for All Scores**

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>Retention Test</th>
<th>Amount Learned</th>
<th>Amount Lost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>mean</strong></td>
<td>12.51</td>
<td>13.00</td>
<td>12.90</td>
<td>0.51</td>
<td>0.17</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>1.60</td>
<td>1.53</td>
<td>2.06</td>
<td>1.24</td>
<td>1.58</td>
</tr>
</tbody>
</table>

In order to examine the scores more closely, the means and the standard deviations for each of the three groups and each test were then established (see table 3). On the pretest, Group C, the control group, showed a slightly higher mean than the other two groups. Group B had the greatest variability in scores on the pretest with a standard deviation of 2.06. On the posttest, Group A, those students who received an explanation with the words during the read-aloud, obtained the highest mean score. Group C, those students who never heard the story, scored higher than group B, those students who were read the story verbatim. It was Group C who obtained the highest score on the retention test, with the least amount of variability in scores.

However, when amount learned scores are examined, a slightly different view emerges. Although Group C had the highest mean score on the pretest, it was group A that showed the greatest gain from the pretest to the posttest. Overall, there appeared to
be a tendency for scores to increase from the prettest to the posttest and then decrease from the posttest to the retention test. Group C, however, actually showed a gain from the posttest to the retention test.

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
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</thead>
<tbody>
<tr>
<td><strong>Pretest</strong></td>
<td>mean</td>
<td>12.22</td>
<td>12.40</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.45</td>
<td>2.08</td>
</tr>
<tr>
<td><strong>Posttest</strong></td>
<td>mean</td>
<td>13.44</td>
<td>12.47</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.54</td>
<td>1.35</td>
</tr>
<tr>
<td><strong>Retention Test</strong></td>
<td>mean</td>
<td>12.90</td>
<td>12.15</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>2.20</td>
<td>2.40</td>
</tr>
<tr>
<td><strong>Amount Learned</strong></td>
<td>mean</td>
<td>1.22</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.31</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Amount Lost</strong></td>
<td>mean</td>
<td>0.50</td>
<td>0.29</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>1.72</td>
<td>1.82</td>
</tr>
</tbody>
</table>

Although trends can be observed through examination of the means and standard deviations of scores across groups, it was necessary to determine the statistical significance of the apparent differences. The purpose of the study was to determine if one means of presentation of words was more conducive to second grade students learning the meanings of unfamiliar words. To show whether the observed differences were due to the independent variable, different presentations of words, of which there was three levels, two separate one-way ANOVAs were used. The first ANOVA examined amount learned scores and the three levels of the independent variable, or the three groups. The research decision was to reject the null hypothesis that there was no difference between the three groups if the computed test statistic was greater than or equal to the critical test statistic, which was $F (p = .05, df = 2, 56) = 3.15$. A summary of the ANOVA findings are presented in table 4. The one-way ANOVA of the amount learned by groups yielded
F (2, 56) 5.079, p < .05. The researcher could reject the null hypothesis and conclude that a significant difference in the amount learned scores was found between the three groups (see table 4).

### Table 4

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>13.6251</td>
<td>6.8126</td>
<td>5.0785</td>
<td>0.0094</td>
</tr>
<tr>
<td>Within Groups</td>
<td>56</td>
<td>75.1206</td>
<td>1.3414</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>88.7458</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Although the ANOVA calculation revealed a significant difference between the amount learned for Groups A, B, and C, it did not show the source of the difference. It could not be determined specifically where the difference between the three groups was. Therefore, two post hoc tests were used following the ANOVA. The Tukey's Honestly Significant Difference Test (Tukey's HSD) showed no significant difference between groups B and C but reported group A to be significantly different than both groups B and C, p = .05. The more conservative Scheffe's Test was then applied. Group A was again found to be significantly different from the other two groups. There were no significant differences found for groups B and C.

In addition to determining whether different presentations of unfamiliar words would result in varying levels of vocabulary acquisition, this study was also concerned with whether these different presentations of words would facilitate different levels of retention of learning. Retention was measured by the amount lost score. This score was calculated
by subtracting the retention score from the posttest score. Therefore, lower amount lost scores were associated with less forgetting, or higher retention.

A second one-way ANOVA was used to examine amount lost scores by groups. The research decision was to reject the null hypothesis that there would be no differences in the amount lost scores between groups if the computed test statistic was greater than or equal to the critical test statistic, which was $F(p = .05, df = 2, 56) = 3.15$.

A summary of the ANOVA findings are presented in table 5. The one-way ANOVA of the amount lost by groups yielded $F(2, 56) = 1.9915, p > .05$. The researcher could not reject the null hypothesis. It could not be concluded that a significant difference in the amount lost scores was found between the three groups.

### Table 5

**ANOVA for Amount Lost Scores by Groups A, B, and C**

<table>
<thead>
<tr>
<th>Source</th>
<th>D.F</th>
<th>Sum of Squares</th>
<th>Mean Squares</th>
<th>F Ratio</th>
<th>F Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>9.6541</td>
<td>4.8271</td>
<td>1.9915</td>
<td>0.146</td>
</tr>
<tr>
<td>Within Groups</td>
<td>56</td>
<td>135.7357</td>
<td>2.4239</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>145.3898</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Chapter Five

Summary, Conclusions, and Recommendations

Introduction

The technique of reading aloud to children has been investigated from many standpoints. One area in which research has been done is in the area of vocabulary acquisition through read-aloud sessions. As can be evidenced from the Review of Related Literature, research has shown contradictory findings with regard to the type of presentation of new words optimal for vocabulary growth. There has been support for the use of active participation on the part of the learner, incidental learning of vocabulary, explanation accompanying new words, and the necessity of repeated exposures. This study attempted to clarify some of the confusion stemming from these contradictions and add to the literature available of vocabulary acquisition specifically through the use of read-aloud techniques.

Summary of the Problem

Read-aloud practices have been found to enhance vocabulary knowledge. Since vocabulary knowledge plays a crucial role in academic success, techniques for maximizing vocabulary development warrant investigation. This study compared amounts of learning that occurred as a result of different presentations of unfamiliar words to second grade students during read-aloud sessions. Specifically, did students demonstrate significant incidental learning of new words by hearing them in the context of a storybook or was it necessary to supplement the story by adding brief explanations of unfamiliar words for learning to take place? Furthermore did a different degree of retention result depending on the manner in which the students learned the new words?
Summary of the Hypothesis

It was hypothesized that there would be no significant difference in the learning of unfamiliar words by second grade students who heard a story read aloud with no explanation of target words and the learning of the same words by second grade students who were given brief explanations of the meanings of the words while the story was read aloud.

Summary of the Procedure

With the guidance of three second grade teachers and a school librarian the researcher selected a storybook that would be appropriate for the second grade students who participated in the study. Target words were then selected and test items were created to serve a dependent variable measure of vocabulary acquisition. Three intact second grade classes were each randomly assigned to one of three groups.

The study lasted three weeks with each group participating once a week. During the first week sessions the researcher visited each class and administered a pretest (see appendix A). Conditions between the groups varied during the second week sessions. Group A was read a story aloud one time with the researcher stopping at each target word and giving a brief explanation or synonym of the word. The story reading was immediately followed by a posttest (see appendix B). Group B also heard the story read aloud one time but received no explanations of the target words. These students then took the immediate posttest. Group C was a control group so they never heard the story but did take the posttest. The third week sessions were the same for the three groups. Groups A, B, and C each took a retention test (see appendix C).
Summary of the Findings

A thorough statistical analysis of the data yielded significant findings in a one-way ANOVA $F\ (2, \ 56) = 1.9915, \ p > .05$ for the amount lost by groups scores. Post hoc Tukey’s HSD and Scheffe’s Test comparisons revealed the significant difference existed in Group A. A one-way ANOVA $F\ (2, \ 56) = 7.009, \ p > .05$ on the amount lost by groups was not significant.

Conclusions

From an initial comparison of the means and standard deviations of the three groups combined there was a trend in students performance (see table 2). All three groups showed an increase in the mean score on the posttest followed by a decrease in the mean score on the retention test. However, when the means for each group on each test were examined separately a break in the trend appeared. The mean score on the retention test for Group C, the control group, was not only higher than the posttest score, but was higher than any mean score of any of the groups on any of the other tests. Looking back to the pretest score for group C showed that they scored the highest of the three groups initially. A one-way ANOVA yielded $F\ (2, \ 56) = 7.009, \ p > .05$. It could then be concluded that Group C was not significantly different from the other two groups from the outset of the study.

To examine the amount of learning or amount of retention occurring within each group amount learned (pretest - posttest) and amount lost (posttest - retention test) scores were calculated (see tables 1 & 2). After thorough analysis of the amount learned scores with a one-way ANOVA $F\ (2, \ 56) = 5.079, \ p < .05$ and post hoc comparisons, Tukey’s HSD $p < .05$ and Scheffe’s Test $p < .05$, it could be concluded that Group A showed significantly greater learning than Group B or Group C (see table 4). This finding
suggests that second grade students who are given explanations of unfamiliar words
during read-aloud storybook sessions will acquire more new meanings of those words than
students who hear storybooks read verbatim or students who do not receive exposure to
the words through the context of a story.

A one-way ANOVA $F(2, 56) = 1.9915, p > .05$ calculated for the amount lost score did
not show significant evidence of differences between the three groups (see table 5).
Therefore, it can be concluded that retention of meanings of new words through
read-aloud storybook sessions with second grade students is not significantly affected by
using explanations of those words or lack of explanations of those words while the story is
being read. However, the retention test was given only after a one week interval. It is
possible that over a longer period of time differences may emerge.

Implications and Recommendations

Research has demonstrated a positive relationship exists between academic
achievement and vocabulary knowledge (Gauthier, 1991). Well developed vocabularies
can be a huge asset in future success. It would be valuable to educators to know under
what conditions vocabulary acquisition is most likely to occur.

Contrary to research supporting the viewpoint that students must be actively
participating in learning new words, this study showed evidence that students can acquire
new meanings simply listening to stories if the story text is supplemented with
explanations of unfamiliar words. It would be beneficial to further examine this concept
by creating situations in which students participate in creating the meanings and comparing
their learning with students who hear teacher-created explanations during read-aloud
sessions. Furthermore, there were increases from the pretest to the posttest for all three
groups which could be interpreted as evidence of incidental learning. However, it is
difficult to determine with this study because the students were exposed to the exact same test items on the pretest and the posttest. Future research may wish to consider changing the test items while still testing the same target words to control for test familiarity and pretest/posttest interaction effects.

With regard to the number of exposures to new words required for learning to occur there are weaknesses in the design of this study. Although students were only read the story one time they were repeatedly exposed to the words on the tests. Since the control group, who never heard the story read, showed gains both from the pretest to the posttest and from the posttest to the retention test it is possible that some learning could have occurred simply from hearing the words repeated from test to test. Research is limited in the area of vocabulary acquisition through single read-aloud sessions, particularly in whole group settings. Teachers are very limited with regard to time so storybooks are not always read to students more than once. Additional research is warranted in the area of vocabulary acquisition from stories read aloud only once to whole groups of children.

Another limitation of this study was that the researcher did not use a random sample of students. It is questionable as to whether there are some characteristics of the second grade students in this particular school that may have contributed to the findings. The sample used was also relatively small. A total of 12 students had to be dropped from the study because of absence on one or more of the research sessions. Researchers contemplating a similar study should attempt to acquire a larger sample in which subjects are randomly selected rather than intact classes that are randomly assigned.

Additionally, there was only one storybook and ten targets words selected for this study. Considering the maximum possible score for each test was 15 and the means for the pretest were 12.22, 12.40, and 12.85 for Groups A, B, and C respectively, there may have been ceiling effects confounding the results. Students scored high on the pretests so
there may not have been substantial room left to grow. Future research should consider
using words of greater difficulty if the test items will be read aloud as they were here.
Lower scores on initial pretests may reveal hidden effects that were not evident with this
study. Another consideration might be to repeat the procedure with additional stories and
words to provide a means of comparison. If second grade students repeat the same
pattern of learning over multiple trials with different words the findings would have
greater value.

The importance of reading and literacy are gaining national recognition through
programs such as President Clinton's America Reads Challenge and America's Goals
2000. Skills associated with reading are cornerstones of success. Since a strong
relationship between reading and academic achievement exists, and reading achievement
hinges on vocabulary knowledge, it follows that enhancing vocabulary development
should be a primary concern of educators. Vocabulary is a critical component of social
and communication skills as well. Therefore, it is important to understand how children
most effectively develop their vocabularies. In a constantly changing society flooded with
information the pool of knowledge necessary to function as a capable, literate individual is
continually growing. If a simple storybook read-aloud can contribute significantly to
mastery of concepts and words necessary for future success it would behoove educators,
parents, and society to proceed with this form of instruction.
REFERENCES


Robbins, C. & Ehri, L.C. (1994). Reading storybooks to kindergartners helps them to learn new vocabulary words. *Journal of Educational Psychology, 86*(1), 54-64.


APPENDIX A
Part 1: Draw a circle around the word or phrase that means the same as the underlined word.

1. sagged: flew hung stood
2. angry: mad pretty happy
3. concrete: soft dirty stone
4. wheel: ladder tire book
5. risk: act silly play it safe take a chance

Part 2: Draw a circle around the word or phrase that means the same as the underlined word.

1. The mouse was so tiny it could fit through a little crack in the wall.
   ugly small large
2. Mother plumped the cushions on the couch.
   fluffed squished washed
3. Tommy ate a big chunk of cake on his birthday.
   plate bowl piece
4. Because Tasha is so quick, she wins every race.
   slow little fast
5. The clever boy thought of a way to solve the problem.
   silly smart nice
Part 3: Draw a circle around the word that best completes each sentence.

1. The broken [ ] made the door hang crooked.
   - window
   - knob
   - hinges

2. We had to put our dog Fluffy in the [ ] while we were on vacation.
   - library
   - kennel
   - trunk

3. I like when I get to sit [ ] my best friend in school.
   - beside
   - on
   - far from

4. The children will [ ] a song in the spring musical.
   - read
   - sing
   - shout

5. Sam could not [ ] the pain of his toothache.
   - choose
   - smell
   - tolerate
Part 1: Draw a circle around the word or phrase that means the same as the underlined word.

1. angry: mad pretty happy
2. wheel: ladder tire book
3. sagged: flew hung stood
4. risk: act silly play it safe take a chance
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1. Mother plumped the cushions on the couch.
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   ugly small large
4. Tommy ate a big chunk of cake on his birthday.
   plate bowl piece
5. The clever boy thought of a way to solve the problem.
   silly smart nice
Part 3: Draw a circle around the word that best completes each sentence.

1. The broken ________ made the door hang crooked. 
   window  knob  hinges

2. The children will ________ a song in the spring musical. 
   read  sing  shout

3. Sam could not ________ the pain of his toothache. 
   choose  smell  tolerate

4. I like when I get to sit ________ my best friend in school. 
   beside  on  far from

5. We had to put our dog Fluffy in the ________ while we were on vacation. 
   library  kennel  trunk
Part 1: Draw a circle around the word or phrase that means the same as the underlined word.

| 1. risk: | act silly | play it safe | take a chance |
| 2. sagged: | flew | hung | stood |
| 3. wheel: | ladder | tire | book |
| 4. concrete: | soft | dirty | stone |
| 5. angry: | mad | pretty | happy |

Part 2: Draw a circle around the word or phrase that means the same as the underlined word.

1. Because Tasha is so quick, she wins every race.
   slow little fast

2. Tommy ate a big chunk of cake on his birthday.
   plate bowl piece

3. The clever boy thought of a way to solve the problem.
   silly smart nice

4. Mother plumped the cushions on the couch.
   fluffed squished washed

5. The mouse was so tiny it could fit through a little crack in the wall.
   ugly small large
Part 3: Draw a circle around the word that best completes each sentence.

1. We had to put our dog Fluffy in the _________ while we were on vacation.
   - library
   - kennel
   - trunk

2. Sam could not _________ the pain of his toothache.
   - choose
   - smell
   - tolerate

3. The children will _________ a song in the spring musical.
   - read
   - sing
   - shout

4. The broken _________ made the door hang crooked.
   - window
   - knob
   - hinges

5. I like when I get to sit _________ my best friend in school.
   - beside
   - on
   - far from
Test Items

The test directions, items, and response selections were read aloud to the students. Distractor items were used to evaluate pretest/posttest interaction effects and to foster success with easier words. These items are shown with an asterisk. Correct responses have been shown in bold print.

Part 1: The researcher instructed students to “Draw a circle around the word or phrase that means the same as the underlined word”.

1. sagged: flew hung stood
2. angry: mad pretty happy
3. concrete: soft dirty stone
*4. wheel: ladder tire book
5. risk: act silly play it safe take a chance

Part 2: The researcher instructed students to “Draw a circle around the word or phrase that means the same as the underlined word”.

*4. Because Tasha is so quick, she wins every race.
1. The mouse was so tiny it could fit through a little crack in the wall.
   ugly small large
2. Mother plumped the cushions on the couch.
   fluffed squished washed
3. Tommy ate a big chunk of cake on his birthday.
   plate bowl piece
4. The clever boy thought of a way to solve the problem.
   silly smart nice

Part 3: The researcher instructed students to “Draw a circle around the word that best completes each sentence”.

1. The broken ______________ made the door hang crooked.
   window knob hinges
2. We had to put our dog Fluffy in the ______________ while we were on vacation.
   library kennel trunk
3. I like when I get to sit ______________ my best friend in school.
   beside on far from
*4. The children will ______________ a song in the spring musical.
   read sing shout
5. Sam could not ______________ the pain of his toothache.
   choose smell tolerate
VITA

<table>
<thead>
<tr>
<th>Name:</th>
<th>JoAnn Ulbricht</th>
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<tbody>
<tr>
<td>Date and Place of Birth:</td>
<td>August 10, 1968 Millville, New Jersey</td>
</tr>
<tr>
<td>Elementary School:</td>
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<td>Graduate School:</td>
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