

Lindenwood University

Digital Commons@Lindenwood University

---

Theses

Theses & Dissertations

---

7-1-1985

## Effects of Standardized Supplementary Activities and Reading Level on Spelling Achievement in First Grade

Lois A. Evans

Follow this and additional works at: <https://digitalcommons.lindenwood.edu/theses>

---

Effects of Standardized Supplementary Activities  
and Reading Level on Spelling Achievement in First Grade

By  
Lois A. Evans



Submitted in partial fulfillment of the requirements  
for the Master of Arts in Education degree  
Lindenwood College  
July 1, 1985

Accepted by the faculty of the Department of  
Education, Lindenwood College, in partial fulfillment  
of the requirements for the Master of Arts in Education  
degree.

Jeanne M. Donovan  
Faculty Tutor

Gene Henderson  
Reader

## Acknowledgments

- To: Jim for his encouragement and patience in helping with statistics and computer instruction.  
(Husband)
- To: Laura for putting up with me while spending more time on course work than with her.  
(Daughter)
- To: Dr. Gene Henderson for his encouragement and guidance over this past year.  
(Professor and Reader)
- To: Dr. Jeanne Donovan for sharing her expertise and guidance over the past five years.  
(Professor and Major Advisor)

## Abstract

Spelling programs in the primary grades often seem to lack internal continuity. Although students may receive appropriate activity lessons early in the school year, by the end of the year they are expected to master weekly lists of high frequency Dolch words in isolation. That is, the students are not given any predeveloped lessons that would allow them to use their spelling words in a meaningful context. It was the present researcher's contention that primary students would show higher levels of spelling achievement when the words were mastered through a standardized program of creative and functional writing exercises and games than when the words were studied in isolated lists. To test this idea, a controlled experiment was conducted, across a ten-week interval using seven classes of first-grade students as subjects. On a random basis, three teacher/classroom units were assigned to an experimental condition, and four teacher/classroom units were assigned to a control condition. In all the classrooms 20 minutes per day were spent on spelling lessons. The experimental teachers received weekly lesson plans that included activity sheets and game

ideas involving the ten Dolch words being studied each week. The control teachers were given only the list of ten Dolch words assigned for that week. On each Friday during the experiment, a standard weekly spelling test was administered by each teacher to measure weekly mastery of Dolch words. Also an end-of-year ("cumulative") test, which measured long-term retention of the 100 Dolch words studied during the ten-week interval, was given to all students at the termination of the experiment. In addition to the experimental versus control manipulation, the students' reading levels (high, average, low) were a second independent variable, in this investigation.

Three hypotheses were developed. Hypothesis 1, which predicted that the experimental students would have higher percent correct on the weekly spelling tests than the control students, proved to be untestable, as a result of a statistical ceiling effect. Hypothesis 2 predicted that the experimental students would have a higher mean percent correct on the cumulative test than the control students. Although this hypothesis was not supported by the statistical significance test, significant teacher difference did show up. The teacher difference accounted for 13% of

the variation among students on the cumulative test. Hypothesis 3, which predicted that reading level would be positively related to spelling achievement on the cumulative test, regardless of treatment, was confirmed by the significance tests. This third statistical procedure, which was more "sensitive" than the first two procedures, also showed that the experimental students were significantly below the control students on the cumulative test. Additional tests showed that the high readers in the experimental condition did no better than the low readers in the control condition. On the basis of these results it was concluded that (a) teachers should include special, preplanned activities in their spelling lessons, but that these activities should be developed by the individual teacher for her particular classroom situation (the activities should not be standardized) and (b) spelling should be taught as part of an integrated language arts program, with reading mastery being emphasized and achieved before spelling mastery is taken up.

## Table of Contents

Chapter		
One	Introduction.....	1
	Background.....	1
	Statement of Problem.....	2
	Hypotheses.....	7
Two	Review of Literature.....	8
	Relationships.....	8
	Methods and Approaches.....	10
	Spelling Programs.....	14
	Group Instruction Versus Individualized....	17
	Study-Test Versus Test-Study.....	17
	Marks (Grading Devices As Incentives).....	20
	Some Final Recommendations.....	21
	Summary.....	23
Three	Procedure.....	24
	Plan and Organization.....	24
	Scoring and Summarization of Spelling Tests	32
	Methods of Statistical Analysis.....	32
	Additional Analysis.....	34



## Table of Contents (Continued)

Chapter		
Four	Results.....	35
	Hypothesis 1.....	35
	Hypothesis 2.....	38
	Hypothesis 3.....	41
Five	Discussion.....	46
	Evaluating the Hypotheses.....	46
	Effect of the Experimental Treatment.....	46
	Effect of Reading Level.....	48
	Conclusions and Recommendations.....	51
	Use of Supplemental Spelling Exercises.....	51
	Effect of Reading Level.....	52
	Appendix A Dolch Word Lists and Teacher Instructions.....	53
	Appendix B Experimental Group's Activity Sheets.....	65
	Appendix C Parent Informational Letter.....	85
	Appendix D Cumulative Test and Instructions.....	86
	References.....	88
	Note.....	91
	Vita Page.....	92

## List of Tables

### Table No.

1	Means and Variances of Weekly Spelling Tests as a Function of Treatments and Teachers.....	36
2	Summary Table for Anova 1.....	37
3	Means and Variances of Cumulative Spelling Tests as a Function of Treatments and Teachers.....	40
4	Summary Table for Anova 2.....	40
5	Means and Variances of Cumulative Spelling Tests as a Function of Treatment and Reading Level.....	43
6	Summary Table for Anova 3.....	44
7	Pairwise Differences Among Cumulative Test Means Ordered According to Size.....	45

## CHAPTER I

### INTRODUCTION

#### Background

Currently the spelling curriculum for first grade in the Francis Howell School district offers a foundation for beginning spelling via a non-graded text entitled Growth in Spelling (Novicky, Dorocak, Faulhaber, Himes, McNerney, Petruziello, & Wolfert, 1975). It is presented early in the year, page after consecutive page on a routine basis, and it requires that the student devote about twenty minutes a day to a two-page lesson. The words presented are grouped by a sound-to-letter scheme in any given lesson. The "blank" space where a letter is to be inserted has a systematic relationship to the sound position where it occurs, and is found in the initial, middle, or ending position of a selected word.

This spelling text serves as part of an instructional program designed to teach the child to "hear" and "analyze" words in relationship to hearing, seeing, and saying words (Hanna & Hanna, 1965). The student is required to compare the way he says and hears the word to the printed symbols. The text uses "highly

regular" spellings; that is, a particular sound is represented by a particular letter or letters. As the lessons progress, the student is asked to spell actual words using pictures as visual cues.

By fourth quarter, a weekly list of spelling words consisting of Dolch words, which are primarily sight words and prepositions, is taught for mastery. At the end of the quarter (which lasts nine weeks) each student receives a letter grade (A,B,C,or D) based on test scores that have been averaged together.

#### Statement of the Problem

The spelling program described above lacks internal continuity (textbook to Dolch words). The students who have been using the spelling textbook are into a reading and writing routine as they insert phonetically spelled high frequency words in a variety of activity lessons. But as the students enter fourth quarter, the activity lessons are abruptly stopped. The students are expected to master weekly lists of high frequency Dolch words in isolation. The students are not given any predeveloped lessons that would allow them to use the words being mastered in written context. If the spelling program is to have any meaning and value for the students it should provide for application of the words mastered

through the use of creative and functional writing and games, as recommended by Funk (1972). It was this researcher's intent to investigate this notion through conducting a controlled experiment. A general description of the rationale of the experiment is presented below.

In any spelling program, it is important to consider that the student needs help in developing a method to analyze words, in regard to sound-to-letter correspondence in "regular" words. Hanna and Hanna (1965) referred to the implementation of such a method as "spelling power". Kottmeyer's (1952) version of "spelling power" included analyzing any word. The student had to determine if each part of the word followed the sound-to-letter correspondence or if it had an irregular sound-to-letter pattern. Once the student analyzed the word, he was able to spell it. Cook (1957), however, warned that too extensive an exposure to word analysis can confuse the young child. Since the high frequency Dolch words consist of many "sight" words having irregular spellings, the typical sound-to-letter relationship would not apply. Therefore, word analysis was not stressed in the present study. Instead, whole word recognition and memorization of letter sequence in

each spelling word was emphasized. Since each student needs to develop a systematic approach to the mastery of the high frequency Dolch words, the procedure for the experimental group's new list of words was: the teacher held up each new word on a flash card and said the word; the students repeated the word orally; the teacher spelled the word noting the letter sequence; and the students spelled the word orally. The flash card was put down. The teacher repeated the word and the students were asked to write the word from memory. Then the teacher immediately checked the work for accuracy.

Research has shown that the list method used in presenting and testing new words is less time-consuming than the sentence method for helping students to master words (Cook, 1957; Hawley & Gallup, 1922). This researcher used the list technique for both groups; but, as suggested by Funk (1972), the sentence-dictation method was also employed to supplement the experimental group's study of the list of Dolch words as a once-a-week activity.

Even though research has shown that students taught by the Test-Study method made greater gains than those using the Study-Test method (Gates, 1931), the testing in those studies was begun at second grade level; thus,

the Test-Study procedure could not be justifiably applied to first graders who were only beginning to identify the printed word. A mid-week practice test was given, teacher corrected, and returned to the students. The graded test was given on Friday each week and the number of errors was recorded.

Waiting until the middle of third quarter of first-grade to begin testing for mastery of the Dolch words complied with what was suggested by Campanale (1962), Hanna and Moore (1953), and Shapiro and Wilford (1969). They argued that spelling was developmental and should be introduced after a strong reading program was well under way, as well as after the letter symbols that represent the phonetic sounds have been mastered.

The seven classes of 1984-1985 first-graders at Central Primary, Saint Charles, Missouri were the population from which the sample was drawn.

The learning disability students (LD) and behavior disordered students (BD) who spent their reading time out of the regular classroom were excused from the experiment. The remaining students in the seven selected classes were randomly divided, using the seven teachers' names placed into a "hat." The first three teachers' names drawn became the experimental

group and received the planned supplemental activity lessons and game ideas with directions. The remaining four teachers, which included this researcher, were asked to carry out their usual plans for presenting the Dolch spelling words. Their plans were to be recorded on plan paper that was provided. Both groups recorded the end-of-week spelling scores as number of errors on the provided tally sheet. A cumulative test was given at the end of the ten weeks to all students involved in the study. The Experimental group means were compared to the control group's at the end of the ten week experiment as well as on the cumulative test for spelling retention.

Each student's reading group (high, average, or low) was also noted. Plessas and Petty (1962) stated that a close relationship does exist between learning to read and learning to spell. They concluded that good spellers are usually good readers and that poor spellers are oftentimes poor readers. They suggested that the level of spelling be lower than the reading level if the student is to succeed. The Dolch words are high frequency words and had already been introduced to each student in earlier reading lessons. Therefore, it was interesting to compare those students in the high and



low reading groups.

#### Hypotheses

1. The experimental group which receives preplanned lessons and game ideas will have higher mean scores on the ten spelling tests than the control group whose teachers will have the option to provide activity lessons or not.

2. The experimental group will have higher mean scores on the cumulative test than the control group.

3. Students in the high reading group will have statistically higher spelling scores than students in the low reading group regardless of treatment. If both groups show a significant difference between the high and low groups, then an additional t-test can be done comparing the high experimental with the high control to see if the treatment was significant.

## CHAPTER II

## REVIEW OF LITERATURE

Spelling, as a tool, has a close relationship to communication, reading, and writing. Spelling also helps support and enrich these subjects (Hanna & Hanna, 1965).

Demands for some agreement on word spellings arose during the 1600's as more and more people began to read (Hanna & Hanna, 1965). By the eighteenth century the first authoritative dictionary was published. As the common school movement grew and the level of formal education in the general population began to increase, people began to assume that those who could spell within the accepted spelling standards were well educated and intelligent, and that poor spellers lacked these desirable traits. Today, the community blames the schools if students cannot spell. The real problem is that, up to now, spelling has been placed in some subordinate position in the language arts area instead of being used as an effective communication tool.

Relationships

Before planning and beginning a specific program, one must first understand the relationships of spelling

to reading, communication, and writing.

The ability to read and the ability to spell have a close relationship, as was pointed out by Plessas and Petty (1962). Spelling selects appropriate letters (graphemes) for the sounds (phonemes) that are represented in a word. The letters are written in the same order that the phonemes are articulated. Thus, spelling consists of word analysis and the process of encoding auditory stimuli into visual/motor stimuli. Spelling starts with the meaning we want and moves toward the word that will express it in our oral language and, finally, in the written symbol (Hanna & Moore, 1953).

In contrast, reading takes the written word and translates it into the phonemic or spoken form. Thus, reading is the converse of spelling (encoding) in the sense that reading is a process of decoding (Hanna & Hanna, 1965). A child's listening vocabulary when he enters first-grade contains thousands of words. As the child learns to represent his oral language through letter-sound symbols in encoding i.e., spelling, he can begin to tap his wealth of information in the activity of reading i.e., decoding. In fact, it has been argued that spelling is developmental, and that spelling

readiness should be taken into consideration in the education process (Campanale, 1962; Hanna & Moore, 1953).

Hanna and Hanna (1965) asserted that the child should begin encoding his oral speech using the alphabetical letters. Then it should follow that by using logic and psychology the child would decode his writing. In standard practice this does not happen.

The responsibility for linking spelling to writing falls upon the classroom teacher. Blake and Emans (1970) placed a strong emphasis on the teacher's knowledge of the subject and her thorough understanding of the rules and terminology of it if she is to effectively plan, diagnose, and remediate. It has been contended that the child, on the other hand, should arrive at the rules or generalizations of spelling through the inductive method (Blake & Emans, 1970; Campanale, 1962; Finch, 1952; Funk, 1972); further, that he arrives only at those rules that represent the words he presently uses.

#### Methods and Approaches

Researchers have shown that both the type of reading program initiated and the timing of it have an impact on spelling. Shapiro and Wilford (1969)

conducted a longitudinal study wherein a formal reading program entitled Initial Teaching Alphabet (I.T.A.) was presented to kindergarteners and first-grade children. A year later, the "kindergartens" out-performed the "first-graders". These results indicated that an early start in a superior reading program can yield both reading and spelling advantages. In another study, Nikas (1970) compared the I.T.A. to a program using traditional orthography. The study was exploratory in nature and used first-grade groups taught one or the other approaches. The author wanted to compare the impact of these two approaches on children's spelling performance and on their spontaneous writings. The results showed no real differences between the groups in spelling performances, suggesting that the two approaches were similar in effectiveness.

Though agreeing that reading and spelling have a close relationship, Plessas and Petty (1962) stated that not all poor spellers are poor readers, and that the poor speller can find success in spelling if the spelling level is lower than the reading level. They suggested words that are useful and crucial to the child's writing should be selected.

Phonological awareness was studied by Zifcak

(1981), who attempted to predict children's reading acquisition. His hypothesis proposed that a child's awareness of a language's phonology would influence early reading success. The results showed a strong phonological awareness in the child's choice of phonemes and in his invented spelling (spelled the way it sounds) in regard to his first-grade reading performance. This result indicated that the child does have some understanding of the relationships of sounds to words as he attempts to spell phonetically. Furness (1958), too, recommended a strong phonics approach, especially in the case of the poor speller.

Groff (1978) and McMullen (1973) were also interested in the phonological impact on reading. They conducted similar studies that looked at minimal vowel changes in words and word recognition in reading. Their results were nearly identical in showing that children do focus on the vowel patterns in words, and, further, that regardless of whether the children could read the word, they could remember the vowel patterns. These outcomes suggested that a child does discriminate between the parts of a word in an attempt to remember it and does not simply memorize the entire word.

Still another study done by Cramer (1970) compared

first-graders' ability to spell phonologically regular and phonologically irregular words using two different reading methods, in the absence of formal spelling lessons. The Language Experience Approach (L.E.A.) and the Basal Reader Approach were used. He hypothesized that both groups would improve in their ability to spell regular words. The L.E.A. groups did extensive creative writing and were in a faster paced word recognition program. The results showed that the L.E.A. classes were significantly better at spelling regular and irregular words in written composition and on lists. On the basis of his findings, Cramer gave suggestions for improving the basal reader: When choosing a method of reading instruction, the teacher should include frequent creative writing, phonic training through practicing auditory and visual discrimination, and a variety of reading materials that expose the child to a wide range of words.

Rudorf (1970) attributed the success of the L.E.A. in Cramer's study to the fact that it removed pressure and did not penalize the child for misspelled words. He believed that through writing, the child more rapidly internalized the rules related to orthography. Therefore, spelling became the mode of communication.

He suggested that the more the child writes, the greater is his need to learn the relationship between reading and spelling. He stated three advantages of the L.E.A. They were: (a) the child is released from the step-by-step prescriptive approach, (b) the child is released from penalty of error, and (c) an emphasis is put on language related skills.

#### Spelling Programs

Blake and Emans (1970) found two views of teaching spelling. One approach was to study the word separately until it was memorized. The other approach was to teach the child a method for analyzing words. The latter approach involved teaching rules inductively and only teaching those rules that were most useful. Hanna and Hanna (1965) also emphasized the inductive analysis approach because it allowed a child to gain "spelling power" over his words. They criticized the way most students were asked to memorize a word by whatever technique works best for the child. It was their opinion that the child needed to be guided. They felt that spelling was more complicated than identifying a word in reading. In spelling a word, most students must not only analyze the sounds and letter representations but note the position of the phoneme



within a word in order to choose the appropriate graphemes for the word. Learning these skills requires training and guidance via the teacher. Kottmeyer's (1952) version of "spelling power" involved the student taking a discriminating look at the parts of a word and deciding if the word parts agree phonetically or deviate from the regular sound-to-letter relationship. Mastering word analysis in reading precedes the ability to spell the word for mastery.

Jackson (1953) compared the relative effectiveness of the basal speller and word analysis approaches to teaching spelling. His experimental group was exposed to the word analysis system through instruction in root relationships, ending similarities, and phonetic blending. His control group used a standard basal spelling book. In spite of the fact that the experimental group was involved in overlearning phonetic blends and had more review time, they did not show higher performance on neutral spelling lists taken from a textbook. This outcome was consistent with Cook's (1957) observation that extensive exposure to word analysis at an early point in the spelling curriculum can be confusing to a young child.

While presenting words for mastery, Hawley and Gallup (1922) compared the sentence method and the list method. The sentence method required that the word be presented in context but with no emphasis put on the test word. The student was required to write the complete, dictated sentence. The other method was to present words in a list form. One word was given at a time, and the child wrote the word down. In all cases the children spelled better under the list method than under the sentence system. The researchers concluded that when students wrote in context a loss in spelling ability was inevitable. They found that the loss was greater in the case of unfamiliar words than when familiar words were used. It was suggested that the list method could prevent such a loss. The researchers also noted that those taught by the list method had better scores, and that the list method saved time when the students were reviewing. Cook (1957) reinforced these findings, in that he stated that the method chosen should involve an adequate amount of drill on standard words. Relatedly, Funk (1972) argued that dictation methods should be used as language arts exercises, and not as part of a spelling test. He stated, for example,

that you could use dictation as a technique to evaluate the student's listening, spelling, handwriting, and composition skills, as well as to gather diagnostic data for future language arts activities.

#### Group Instruction Versus Individualized Instruction

Using two third grade classes, Eisman (1962) conducted an experiment to compare group to individual instruction. One class, the control group, was given a weekly list of words from the basal spelling book. The other class was given a list of words compiled from the basal spelling book and put in alphabetical order. The words were graded 1 through 10 (easy to difficult). The individual chose words from this list according to his level. As he passed a test, he was moved on to the next higher level. Any words missed were added to his next week's list. The study and practice tests were the same, and a final test was administered each Friday. The results showed an average increase of 1.5 grades in spelling ability for those working in the individualized program when compared to the group program. The study implied that students did better when they planned their own spelling lessons.

#### Study-Test Versus Test-Study

Gates (1931) compared the study-test method with

the test-study method. In the study-test method the students studied all the words prior to the practice test. The practice test was immediately checked and was followed the next day by an end-of-week test. The study-test method worked best with Grade II and low Grade III. Thus, the duller student made greater gains using this method, probably because the study-test plan set standards for accuracy. That is, the student studied all the words prior to the test.

Gates found that the test-study method produced mastery of words by the time the third test in the sequence occurred. The test-study method yielded greater gains from high Grade III through Grade VIII. This method was recommended for use with bright students from the very beginning and starting in the middle of Grade V for the slowest students. The superiority of this technique was in its accommodation to individual differences in mastery of words in an assignment. Its greatest weaknesses were the study plan itself and proper time management. This criticism was in reference to the students, in that they were personally responsible for how they managed their study time. If they chose to not study or to not study carefully, the spelling words were not mastered. Teachers found it

very difficult to oversee each student's study time. The technique had some other defects as well. Some errors went unnoticed, since the tests were student corrected. When scoring the test the student needed to develop a higher standard of accuracy. Because the test was administered before the words were studied, initial errors were reinforced in the first testing session. This arrangement also led to a complacency towards making errors. However, Gates concluded that there was no evidence that a tolerance for misspellings developed.

Variations to the test-study plan were presented in a study done by Schoephoerster (1962). He used three variations and designed an experiment to ascertain their comparative value. Plan I involved having student participation in the pronunciation and definition of the word. Then an initial corrected test followed on Monday, with the mastery test being given on Friday. Plan II used a mid-week corrected test as well. Plan III resembled Plan I except that, on Wednesday, study time was set aside. The results showed that superior students learned most efficiently in Plan I. The average and below average students worked best in Plans II and III. The lowest students were most successful in Plan III. On the basis of these results it seemed that

scheduled study time and a practice test were most appropriate for the beginning speller.

In regard to self-corrected tests, Hall (1962) designed a procedure entitled "Letter Mark-Out" corrected test. This technique used a test-study method wherein the student used a marking pen to mark out the letter(s) missed, and corrected it(them) above the defective item(s). Then the student rewrote the corrected word beside the original. Next, the student studied the corrected test. This was intended to motivate the student to use this method as a learning device.

#### Marks (Grading Devices) As Incentives

Sand (1938) conducted a study to evaluate marks used as incentives in learning to spell. In the experimental group, he emphasized the social value of correct spelling and learning to spell words for self-satisfaction. The control group was exposed to the conventional method of teaching spelling. Marks were recorded systematically, and the control group was made "mark conscious". The results showed that the experimental group excelled compared to the group using the conventional method.

### Some Final Recommendations

Funk (1972) made several noteworthy statements regarding how to improve the spelling curriculum. They were:

1. Use the basal speller as a resource tool, but utilize non-textbook materials to stimulate students' interests.
2. Individualize to keep students interested and work them at a level to meet their present needs.
3. Apply research results to the spelling program.
4. The spelling errors found in creative and functional writing should be a source for immediate study.
5. Learning activities should be determined by the needs of the class as assessed in written performances.
6. Spend only the time necessary to discuss meanings of new words.
7. Help each child to develop a systematic approach to the mastery of words.
8. Develop spelling consciousness and a positive attitude in the students.
9. Put spelling in the total curriculum, and make

provisions for a dictionary program.

A personal dictionary used with first graders was described by Zeitz (1978). She recommended using it after readiness skills for spelling have been acquired. Along these lines, a file dictionary described by Fink and Hogan (1965) could be adapted for young children. In their approach, the words were put on file cards and placed into one of three sections within a box: (a) words to be learned, (b) words to be reviewed, and (c) words learned. Both dictionaries were used with creative writing exercises. The number of words mastered was more important than number of words taught.

Games used periodically to teach spelling should include everyone. Poley (as cited in Campanale, 1962) suggested how to alter the Spelling-Bee and keep everyone playing. Whenever a word is misspelled a mark is assessed against the student's team. At the end of the game the team having fewer marks wins.

Hanna and Moore contended that the best way to teach spelling is to insist on accuracy in written work, which helps to develop proficiency. Also, spelling instruction should be kept in proper perspective, being scheduled separately and daily, as recommended by Funk (1972) and Hanna and Moore (1953).



Summary

In summary, this review of the literature dealing with spelling and its relationships to the language arts seems to lead to some general conclusions. These are:

1. Teachers need to be better prepared in the subject area of spelling.
2. The methods and approaches chosen are numerous, but grade level, learning level, and available time narrow the range of choices.
3. The research on spelling not only serves to stimulate new research, but also should be applied where possible to the improvement of the spelling program.
4. By the teacher's striving for personal spelling accuracy and "spelling power," the students will come to value it.

## CHAPTER III

## PROCEDURE

Plan and Organization

The purpose of this experimental study was to compare spelling mastery test means of an experimental group that received supplementary creative and functional writing lessons to those of a control group that received "regular" teacher instruction. Across a period of ten weeks, the experimental and control groups were compared on their averages for the ten test scores and their averages on the final cumulative test.

The 100 Dolch words list was provided by the remedial reading specialist at Central School. These words to be mastered and tested were randomly divided into ten equal lists and calendar dates assigned to each list spanning the months of February through May. This part of the procedure took place prior to the beginning of the experiment. (For an example of the actual 10 lists and dates see, Appendix A, page 53.)

A record keeping sheet was completed weekly by the individual teachers as each student's scores were recorded for each end-of-week test. The form provided a column under the teacher's name for alphabetically

listing the names of students involved in the study, as well as the names of those excused owing to learning disabilities. Next to each name, each teacher noted the student's reading group level of high (h), average (a), or low (l). Zero errors on an end-of-week test was recorded on the tally sheet as -0 and one error as a -1 etc. The tally sheet had twelve gridded slots beside each student's name. The first ten were used to record the weekly test scores of each individual taking the test within the classroom. The eleventh column was used to record each student's percentage score based on the 100 words. The culminative test score percentage of words retained by the individual student after ten weeks of studying and testing for mastery were recorded in the twelfth column.

At the very bottom of each column, the mean score was calculated by this researcher after all test scores had been recorded by the individual teachers. (A copy of the tally sheet along with two additional pages of specific grading instructions can be found in, Appendix A, pages 54-57.)

Random selection of the seven teachers to participate in the study was carried out about one month prior to the beginning of the experiment. The first

three teachers drawn from a "hat" became the experimental group and received each week's preplanned supplementary spelling materials. (A copy of each of the twenty activity sheets can be found in, Appendix B.) The four remaining teachers, including this researcher, became the control group. The control group teachers were instructed by this researcher in a meeting prior to the start of the experiment to carry out their usual methods of instruction in presenting the weekly lists of words.

All teachers received the weekly list of words in the order to be presented for the practice test on Wednesday and the end-of-week test. Each teacher was required to spend twenty minutes each day for spelling. Whenever a holiday or snow day occurred during the spelling week the next school attendance day was to have a thirty minute spelling lesson. This allowed enough time to cover the missed lesson. A memo was given to each of the teachers explaining the general procedure. (For an example of the actual letter see, Appendix A, pages 58-60.)

The teachers in the experimental group were asked to follow the proposed week's schedule as follows:  
Monday: Words for the week were introduced by the

teacher. She was given flash cards containing the spelling words for the week. The following procedure was used:

1. The teacher held up each word and said it.
2. The students repeated the word.
3. The teacher spelled the word, noting the letter sequence. The word was used in a sentence.
4. The students spelled the word aloud.
5. The teacher put the card down and asked the students to write the word from memory.
6. The teacher immediately checked the word for accuracy.
7. This procedure was used for each word.

Tuesday: The students used an activity sheet that incorporated that week's words in a functional or creative writing lesson. When possible the activity was checked upon completion as a group. The teacher sent this activity sheet home with the students. An optional Spelling Bee Game was suggested if time permitted. The students were divided into two teams. All spelling words to date were used. When a student correctly wrote the word on the chalkboard, a point was given for his/her team. After a turn, the student moved to the back of the line whether or not a point

was scored.

Wednesday: The practice test was administered by the individual teachers. The students were given regular handwriting paper. Students were told that reversal of a letter or improper use of an upper case letter was to be counted as an error. Each word was said twice by the teacher and used in a sentence before the student wrote it. After the test was completed the teacher checked, corrected, and returned each test to his/her owner. All Wednesdays' tests were sent home for parents to view.

Thursday: The second activity sheet was provided for the teacher to carry out with her students following Tuesday's procedures. Sentence dictation followed the activity sheet. Two sentences containing several words from the current list were provided for each week. The teacher corrected any spelling word errors and retained these papers to be turned in with end-of-week tests.

Friday: The week's spelling test for checking mastery of the words was given. As was in the practice test, this end-of-week test followed a precise but different order of administration. The test procedure modeled Wednesday's. When completed the teacher collected, corrected, and entered each student's score on the grade sheet provided. Anyone who was absent on Friday was

given a make-up test on Monday at the teacher's convenience. All tests and sentence dictations were turned in to this researcher by Monday afternoon. (See a copy of the experimental's detailed plans that included the weekly sentence dictation in, Appendix A, pages 61-63.)

Rewards were optional for both groups but every teacher used rewards.

The control group teachers were given a plan folder with the following guide lines allowing twenty minutes per day:

Monday: Introduced spelling list of words for the week. Sent home list of words with the students.

Tuesday: Lesson plans were developed and written by the individual teachers. A sample of any activity sheet used was attached to the back of that week's plans and dated.

Wednesday: Administered the practice test using the same precise order that was given the experimental group. Tests were checked, corrected, and returned to the individual students and sent home to parents.

Thursday: Followed Tuesday's format.

Friday: Administered end-of-week test in predetermined order and collected upon completion. At the teacher's

convenience the tests were checked, corrected, and scores recorded on the provided tally sheet. (A copy of the control group's skeletal plans are found in, Appendix A, page 64.)

Any Monday's make-up tests were given and scored at the teacher's convenience. All tests were sent to this researcher that afternoon.

All students received a list of the week's Dolch words at the beginning of each spelling week. A letter, accompanying the first list of words, was sent home to the parent(s) of each student in the experiment by this researcher. It briefly explained that a spelling program for a letter grade was beginning. Parents were given the option to work with their children on each week's list, as is school policy. (A copy of the letter to the parents is found in, Appendix C, page 85.)

At the end of the ten week experiment all teachers found the percentage scores for each student in her class and recorded it in the eleventh column. A copy of these scores was made and attached to the teacher's grade book. Then each teacher's individual folder containing plans, rewards, and sample activity sheets (control group only) was turned in to this researcher to analyze.



The cumulative test of the 100 Dolch words was given in the same word order but was divided into five, twenty word tests. The tests were administered by the individual teachers over a week's span after completion of the ten week program. Each of the teachers in the experiment was given a special instruction sheet explaining the cumulative test procedures and the test itself. (A copy of the cumulative test with instruction sheet can be found in, Appendix D, pages 86 and 87.) All completed cumulative tests for each classroom were bundled and turned into this researcher to correct and tally.

#### Scoring and Summarization of Spelling Tests

On Friday of each of the 10 weeks, every student took a 10-word spelling test over the special words that he/she was assigned that week. Thus, the total possible score on the weekly quizzes was 100 points; this made the sum of weekly raw scores equivalent to "percent correct" on weekly quizzes. "Percent correct" on weekly quizzes was one of the two dependent measures used in the study.

The second dependent measure was "percent correct" on a 100-point cumulative spelling test given at the end of the experiment. That test consisted of the same 100

words that appeared in the weekly quizzes, but the cumulative test measured the students' long-term retention of the spelling lessons.

#### Methods of Statistical Analysis<sup>1</sup>

To test the various hypotheses in this investigation, it was necessary to carry out three analyses of variance (ANOVA). The first two ANOVAs had the same "statistical design" and are discussed together below. The third ANOVA addressed a different kind of question from the first two and, therefore, is discussed separately.

ANOVAs 1 and 2. Hypotheses 1 and 2 in this study concerned a comparison of the experimental and control groups, first on the weekly quizzes and, second, on the cumulative test. But since different teachers, using unique teaching styles administered the respective "treatment" (experimental vs. control), the effect of teachers "nested" within treatment had to be analyzed as part of the ANOVA (See Kirk, 1968). Thus the ANOVA design used in testing both the first and second hypotheses was a 2 x (3,4) "hierarchical factorial" ANOVA; treatment (experimental vs. control) was the primary independent variable and teacher/classroom units "nested" within treatments was the secondary independent

variable. Three teachers were "nested" within the experimental treatment and four teachers were "nested" within the control treatment.

According to Kirk (1968), in this kind of ANOVA, the mean square for teachers, and not the mean square within ANOVA "cells," is the correct error term, or denominator, in the F ratio used to test for treatment effects. Unfortunately, this makes the F test "insensitive," meaning unlikely to be significant even if the treatments did have a real effect on spelling achievements (see Kirk, 1968, pp. 229-235). This problem is mentioned here because it seems to have affected the statistical outcome of this study (see "Results" section).

According to Kirk (1968), the correct error term for the F ratio used to test for teacher effects is the "mean square within cell," as is true of the usual type of ANOVA.

ANOVA 3. Hypothesis 3 of the study concerned the effects of two variables on spelling achievement: treatment (experimental vs. control) and reading level (high vs. low). According to Kirk (1968), this kind of experiment requires a 2 x 2 factorial ANOVA, which tests the effects of each independent variable as well as the

effect of their interaction. Supplementary t tests were also used to find out if the experimental and control treatments were significantly different at each reading level.

Additional Analysis. All significant effects were subjected to an Eta-squared ( $\text{Eta}^2$ ) analysis.  $\text{Eta}^2$  is a measure of the proportion of variation in the dependent variable (see Kirk, 1968).

## CHAPTER IV

## RESULTS

Hypothesis 1

Hypothesis 1 stated that the experimental group, which received preplanned activity lessons and game ideas, would have a higher mean score on the ten spelling tests than the control group, whose teachers had the option to provide activity lessons or not. The mean weekly spelling test scores for the seven classrooms are given in Table 1, and the summary of the ANOVA analyzing these means appears in Table 2.

Table 1 shows that all of the classes had very high means on the weekly test. Thus, week-by-week mastery seemed to be very good regardless of the teaching approach used. As Table 2, indicates, neither the treatments nor individual differences among teachers produced a significant effect on the weekly spelling tests. However, as the next ANOVA will suggest, the absence of any effect here may be a result of a "ceiling phenomenon." That is, since scores on the weekly tests could not be higher than 100%, and since so many students obtained perfect scores each week, variation between class means was limited from about 92% to 100%.

Table 1  
Means and Variance of Weekly Spelling Tests  
as a Function of Treatments and Teachers

Statistic	Treatment							
	Experimental			Control				
	1	2	3	1	2	3	4	
Mean	92.09	94.70	93.2	92.39	97.24	97.15	94.63	
Variance	124.66	26.62	126.17	80.61	9.49	7.18	40.58	
Sample Size	22	21	20	18	21	20	19	

Table 2  
Summary Table for ANOVA 1<sup>a</sup>

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F
Treatment	1	164.94	164.94	2.22 <sup>b</sup>
Teachers w. Treat.	5	371.76	74.35	1.86 <sup>b</sup>
Within Cell	134	5357.32	39.98	
Total	140			

<sup>a</sup> Note: Because of the unequal sample sizes, an unweighted-means analysis had to be used; consequently, the various sums of squares did not add up to the total sums of squares, and therefore the total sum of squares was not calculated (see Kirk, 1968).

<sup>b</sup> Not significant at the .05 level.

This may not be enough room to allow treatment or teacher effects to show through in the significance tests.

### Hypothesis 2

Hypothesis 2 stated that the experimental group would have a higher mean score on the cumulative spelling test than the control group. The cumulative test means for each of the seven classrooms are shown in Table 3. Fortunately, the cumulative test was challenging enough to prevent a recurrence of the "ceiling phenomenon," which interfered with interpreting the results of ANOVA 1. The mean percent correct in the present analysis ranged from 73.27 to 93.71; apparently there was sufficient room for the means to differ from one another, if either of the two independent variables had an effect on spelling achievement. As Table 4 shows, however, only the teacher differences were statistically significant. This suggests that the teachers' individual personalities, style, and approaches influenced the students' spelling achievement, even though the special treatment given the experimental group had no effect.

To measure the strength of the teacher effect,  $\text{Eta}^2$  ("eta squared") was computed on the sum of



squares for teachers (see Kirk, 1968).  $Eta^2$  was equal to .13, which means that about 13% of the variation in cumulative spelling test scores was explained by teacher differences. The square root of  $Eta^2$  (that is,  $Eta$ ) is the correlation between teacher differences and cumulative test scores.  $Eta$ , in this case, was .36, a fairly low correlation.

It is interesting that even though neither ANOVA 1 nor ANOVA 2 showed an effect of treatment, the means of the experimental classrooms were lower than the means of the control classrooms. Maybe the experimental treatment had a negative effect on spelling achievement but the "insensitive" ANOVA design used in ANOVAs 1 and 2 (see "Method" section; also Kirk, 1968) was unable to detect the significance of the negative influence. ANOVA 3, which is discussed next, was a better (more sensitive) statistical test (see Kirk), and it did give a different result.

Table 3  
Means and Variances of Cumulative Spelling Tests as a  
Function of Treatments and Teachers

Statistic	Treatment							
	Experimental			Control				
	1	2	3	1	2	3	4	
Mean	73.27	88.95	84.15	88.22	93.71	92.55	85.21	
Variance	325.54	88.55	197.29	127.36	81.61	46.16	223.73	
Sample Size	22	21	20	18	21	20	19	

Table 4  
Summary Table for ANOVA 2

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F
Treatment	1	2197.80	2197.80	3.174 <sup>A</sup>
Teacher w. Treat.	5	3461.91	692.38	4.407 <sup>B</sup>
Within Cell	134	21055.02	157.13	
Total	140			

<sup>A</sup> Not significant at the .05 level.

<sup>B</sup> Significant at the .01 level.

### Hypothesis 3

Hypothesis 3 stated that students in the high reading group would have statistically higher cumulative spelling scores than students in the low reading group, regardless of treatment; further, that the high readers in the experimental group would have a higher cumulative mean than the high readers in the control group. The group means and variances that relate to Hypothesis 3 are given in Table 5. Not only did the expected high/low reading level difference occur, but also the unexpected superiority of the control condition over the experimental condition again seems apparent. However, this time the unexpected direction of the treatment difference was significant; as can be seen in the ANOVA summary table (Table 6) -- the experimental group did significantly worse than the control group on the cumulative test. This contradicts Hypothesis 3, which predicted exactly the opposite effect. This also suggests that the apparent, but nonsignificant, superiority of the control condition in ANOVA 2 may have represented a valid trend that was missed by the "insensitive" ANOVA procedure used in that case (see "Method" section; see Kirk, 1968).

As Table 6 shows, the treatment did not interact

with reading level. This means that the difference between the experimental and control condition was not significantly bigger or smaller at the high reading level than at the low reading level.

Table 7 compares all of the differences among all means in ANOVA 3, using The Tukey Honestly Significant Difference (HSD) test (Evans, 1985; Kirk, 1968). Mean difference in this case had to be larger than 9.71 to be significant. In spite of the nonsignificant interaction, Tukey's HSD test showed that while the low readers in the experimental group did significantly worse than the low readers in the control group, the two high groups did not differ. Maybe the absence of a difference between the two high groups was due to a ceiling effect in the high-control sample. It was interesting that the low readers in the control group did no worse than the high readers in the experimental group (see Table 7). This suggests that the experimental treatment definitely interfered with spelling mastery, compared to what teachers normally do when they teach spelling.

An Eta<sup>2</sup> analysis of the sums of squares in Table 6 showed that 29% of the variation in cumulative spelling test scores was accounted for by reading level

and that the treatment accounted for only 5.5% of score variation. It is worth repeating, at this point, that ANOVA 2 earlier showed that teacher differences accounted for 13% of the variation on the cumulative test.

Table 5

Means and Variances of Cumulative Spelling Tests as a Function of Treatment and Reading Level

<u>Statistic</u>	<u>Treatment</u>			
	<u>Experimental</u>		<u>Control</u>	
	<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>
Mean	90.96	71.22	94.37	81.86
Variance	55.42	343.83	114.93	86.59
Sample Size	27	18	30	14

Table 6  
Summary Table for ANOVA 3

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	F
Treatment	1	998.82	998.82	7.23 <sup>A</sup>
Reading Level	1	5270.00	5270.00	38.14 <sup>A</sup>
Interaction	1	265.121	265.12	1.919 <sup>B</sup>
Within Cells (Error)	85	11744.79	138.17	
Total	88			

<sup>A</sup> Significant at the .01 level.

<sup>B</sup> Not significant at the .05 level.

Table 7  
 Pairwise Differences Among Cumulative Test Means  
 Ordered According to Size<sup>A</sup>

	Exp. Low= 71.22	Con. Low= 81.86	Exp. High= 90.96	Con. High= 94.37
E.Low= 71.22	0.00	10.64 <sup>B</sup>	19.74 <sup>B</sup>	23.15 <sup>B</sup>
C.Low= 81.86	----	0.00	9.10	12.15 <sup>B</sup>
E.High= 90.96	----	----	0.00	3.41
C.High= 94.37	----	----	----	0.00

<sup>A</sup> Mean difference required for significance at the .05 level was 9.71.

<sup>B</sup> These mean differences are significant at the .05 level.

## CHAPTER V

## DISCUSSION

Evaluating the Hypotheses

Effect of the Experimental Treatment. Both Hypothesis 1 and Hypothesis 2 predicted that specially preplanned activities would boost spelling mastery -- immediate mastery on the one hand and long-term mastery on the other. Although neither of these hypotheses received a fair test, due to statistical problems, the opposite of what was predicted seemed to happen in each case: The spelling test means of the experimental classes were numerically lower than the means of the control classes. In fact, a better statistical procedure, used to analyze Hypothesis 3, confirmed the statistical validity of the experimental condition's consistently lower performance. It seems true, then, that the carefully thought out, special study activities used in this study backfired. They actually seemed to interfere with the students' progress in the mastery of spelling.

What is likely to have caused this unexpected outcome? The answer seems to be that both the experimental and the control conditions had "preplanned"



spelling curricula. The experimental condition's curriculum was researcher-made, and it had to be carried out following specific guidelines. This arrangement did not provide any flexibility for the experimental teachers to make the special curriculum "fit" their students and teaching style. The control condition's teachers also had preplanned, special activities. But, in contrast to the experimental teachers, the control teachers developed and applied their own personal, "tailor made" spelling curricula. The greater freedom experienced by the control teachers allowed their enthusiasm, individual expertise, and specific teaching/learning styles to be molded to their particular classroom and student situations. Two of the four control teachers, for example, used visual, tactile (e.g., "finger write" the spelling words on your partner's back), and concrete learning games that were absent in the experimental classes. So most of the control teachers were actually using special devices to improve spelling mastery. But it is important to note that these activities were the personal creation of the individual teacher; they represented her approach, her students' special needs, and the way she adapted to the learning situation. In contrast, the experimental

teachers, who ended up producing lower levels of mastery, were "forced" into using a fixed teaching program imposed from the "outside."

This explanation of the unexpected result of this study fits with observations made by Hanna and Hanna (1965) and Funk (1972), who suggested that each teacher should be the expert in her classroom and truly understand the needs of her students when developing a spelling program. These recommendations were allowed for in the control classrooms of the present investigation. In comparison, the experimental teachers, instead of being spelling experts in their classrooms, had to cope with and be more concerned with the procedures and format of the experimental design. It is likely that this restriction inhibited the normal enthusiasm and creativity that they otherwise would have put into developing supplementary spelling activities specifically for their classes.

Looking back, it also appears that the content of the experimental activity sheets may have confused the young spellers in the experimental classrooms, possibly in the following way:

The student not only needs to analyze the sounds and letter representations, but also note the position

of the phoneme within the word in order to choose the appropriate grapheme for the word (Blake & Emans, 1970). Several of the preplanned activity sheets had the students "find" the spelling words from a series of words. Some of the target words were spelled either in reverse order or out of regular letter order. This may have confused the new speller by disrupting the normal linkage between letter order, phonemes, and graphemes.

Effect of Reading Level. The third hypothesis in the study went beyond predicting what the experimental treatment might do to spelling mastery by stating that students' reading levels would be positively related to scores on the cumulative spelling test, regardless of treatment. This hypothesis was strongly supported by the statistical analysis, which showed that 29% of the variation in cumulative-test scores was accounted for by differences in students' reading levels. This finding suggests that reading readiness is a powerful determiner of students' progress in spelling achievement.

The high reading groups in this study seemed to be making spelling-to-reading-connection that Plessas and Petty (1962) felt was a necessary part of learning how to spell. The high reading groups had mastered the background information needed for applying appropriate



consonant letters to sounds. These students also were further advanced (relative to low readers) in the various vowel patterns and their respective letter combinations.

When the spelling errors of the high readers in this study were noted, it was found that the errors were within a logical phonetic possibility; they seemed to be making an "educated guess." As Groff (1978) and McMullen (1973) suggested, the young child who has had a strong reading series carries over the letter-to-sound patterns from reading to spelling. In the process, the child appears to discriminate critical parts of the words rather than simply memorizing the entire word. The following words, for example, were frequently misspelled, but with phonetic lawfulness, by the high readers:

call - cal	before - befor
they - thay	will - wil
said - sed	under - undr
some - som	come - kum

On the other hand, the low readers chose either to leave the "space" blank beside the corresponding number or showed grossly misspelled words. Errors made by some of these children were as follows:

myself - myislfil      under - uraed  
 yellow - yotloy      jump - juepp

The present high-low reader difference in spelling achievement seemed to be consistent with the argument set forth by Campanale (1962) and Hanna and Moore (1953) that spelling is a developmental process. The low readers were still trying to blend sounds together to say a word and, therefore, had a more difficult time with the inverse process (to look at the isolated phonemes) that spelling a word requires.

#### Conclusions and Recommendations.

Use of Supplemental Spelling Exercises. It is not the intent of the present researcher to leave the impression that special, preplanned activities are of no use in teaching students to spell. On the contrary, it was noted in organizing the results that the control-condition teacher whose students consistently performed the best was also the teacher with the greatest number and variety of supplementary spelling exercises. One of these exercises, for example, required her students to write the spelling words in sand; another exercise had the students manipulate plastic letters to make the spelling words; still another involved them in "finger writing" the words on

the backs of other students. This researcher, therefore, wishes to stress the importance of using special activities, not just drill, in teaching spelling. But the supplementary exercises should be developed by and for the individual teacher, to fit her particular philosophy and student group; the exercises should not be standardized. The importance of individual differences among teachers was indicated by the fact that 13% of the variation in cumulative test scores was accounted for by teacher variation. Teacher individuality, therefore, must not be ignored in shaping the spelling curriculum; it should be encouraged.

Effect of Reading Level. Spelling should be taught as part of an integrated program in language arts and perhaps should be introduced late in the program, after a good reading foundation exists. The low reader, in particular, often has special problems with spelling. It was for this reason that Zifcak (1981) and Furness (1936) recommended a letter-to-sound phonetics list of spelling words for the low reader. At the researcher's school, the learning disabled first graders already use such an approach, which emphasizes the spelling of word families. This type of program probably would benefit low readers in the regular classroom as well.

[Faint, illegible text, likely bleed-through from the reverse side of the page.]

APPENDIX A

[Faint, illegible text, likely bleed-through from the reverse side of the page.]

FIRST GRADE SPELLING EXPERIMENT OF 100 DOLCH WORDS

<u>Feb. 11-15</u>	<u>Feb. 18-22</u>	<u>Feb.25-1</u>	<u>Mar. 11-15</u>	<u>Apr. 15-19</u>
yellow	come	not	do	around
so	to	she	all	here
did	before	pretty	into	is
two	said	down	red	yes
go	help	jump	going	get
stop	black	too	eat	six
away	on	ask	from	play
little	by	her	I	four
him	three	he	just	sleep
today	as	fly	call	run
<u>Apr. 22-26</u>	<u>Apr.29-3</u>	<u>May 6-10</u>	<u>May 13-17</u>	<u>May 20-24</u>
ride	but	its	my	good
they	then	soon	brown	saw
can	that	you	your	green
was	no	at	for	some
one	blue	long	look	ten
had	if	and	big	myself
up	me	under	be	who
are	out	will	see	an
this	his	make	old	we
walk	in	the	cold	like



Tally Sheet

E/C NAME	E/C	HAL	1	2	3	4	5	6	7	8	9	10	AVE	CUM.
	1													
	2													
	3													
	4													
	5													
	6													
	7													
	8													
	9													
	10													
	11													
	12													
(continue numbering)														

Counting of errors on spelling words

For all students involved in the experiment each teacher should count as errors any word having letter reversals and improper use of capitalization with the exception being the word "I" when checking their papers.

When introducing a new list of words each week, each teacher please announce to students that reversals and improper use of capitalization will be counted as an error. Showing the students the printed word and how it should look to be spelled correctly will help emphasize the point. The word "I" is the only spelling word, that the students will eventually have, needing to be capitalized in all situations.

There will be times in the experimental group's activity sheets and in Thursday's sentence dictation when the spelling word will begin a sentence and need to be capitalized. Those teachers will need to emphasize this when presenting the activities each time.

Information Concerning the Record Keeping Sheet

The teacher needs only to use her initials at the top left of the tally sheet. Circle either E (experimental group) or C (control group). Students' names are to be listed last name first, then first name. Note male/female by writing M or F beside the respective student. Reading group for each student needs to be marked (H) high, (A) average, and (L) low under the HAL column. If the student is in the LD or BD room for reading mark as such. Before the experiment begins, please check with the specific resource teacher concerning whether or not the LD or BD student will be involved in the regular classroom spelling. If the student is not participating please draw a line through the weeks of testing.

Only the Friday test scores are to be recorded.

Zero errors are recorded as a (0) and one error as a (1), and so forth. Any Monday make-up test scores will be entered in the previous Friday's spot with no penalty.

In the eleventh column an (AVE) heads it. This is where the average percent scores for the ten weeks are placed for each student. It is found by totaling the errors and subtracting that number from 100. Calculate

Information concerning the record keeping sheet continued:

the percentage score for any student with fewer than ten test scores. For an example, John Smith missed a total of 10 words on 8 tests that he had taken. One would first subtract 10 from 80 (10 words x 8 tests) getting 70. Then 70 is divided by 80 using a calculator and yielding an 87.5 or 88% for his percent score. All scores will remain as percentages on the score sheet. For your grade book and fourth quarter spelling grades these percentages can be easily equated to letter grades. Please be sure to record grades in your grade book or have this researcher make a copy of the tally sheet for you. The tally sheet will need to be turned into this researcher at the end of the fourth quarter, June 5.

INFORMATION CONCERNING SPELLING EXPERIMENT INVOLVING ALL  
FIRST GRADE TEACHERS

At our first-grade-level meeting three teachers will be randomly chosen and identified as the experimental group. These teachers will receive a packet of preplanned activities and lesson plans for the ten weeks that the experiment runs.

The remaining four teachers will become the control group and be given the option to develop her own activities and lesson plans. Plans will need to be recorded on the planning paper provided by this researcher for the ten weeks. Any activity sheets developed need to have a sample attached to the back of the particular plan-week used. Any game activities used need to explained on the back of the particular plan-week used, as well.

All teachers will be asked to devote twenty minutes a day for spelling. Each of the seven teachers can expect to receive the following materials:

1. A class spelling score sheet to enter each student's end-of-week (Friday's test) score.
2. The 100 Dolch words broken down randomly into ten words per list and the respective dates for each.

Spelling information for experiment continued:

3. A weekly list of spelling words for each student in the experiment to take home at the beginning of each week.
4. A parental information note to go home on the date at the top of it (prior to the beginning of the spelling experiment).
5. Weekly lesson plans provided for the experimental group and skeletal plans for the control group with additional space for writing in your personal plans.
6. Wednesday and Friday test words (Wednesday's list are in reverse order of the randomly selected Friday's test) for each week.
7. Handwriting paper will be provided for any teacher whose class supply is depleted.

It is important to note the following information: Wednesday's practice test is teacher corrected and not recorded but sent home with the respective student. Friday's test is teacher corrected with the number of errors recorded on the tally sheet and each test is turned into this researcher by Monday afternoon after any make-up tests (if any) have been given. If you reward zero errors each Friday please note on plans.

Information concerning spelling experiment continued:

If a cancellation of school occurs, the next school day will have to include a 30 minute lesson, instead of a 20 minute one, to cover any previously required lessons.

A concise spelling schedule follows:

list 1 Feb. 11-15	list 6 Apr. 22-26
list 2 Feb. 18-22	list 7 Apr. 29-3
list 3 Feb. 25-1	list 8 May 6-10
list 4 Mar. 11-15	list 9 May 13-17
list 5 Apr. 15-19	list 10 May 20-24

Cumulative 100 Dolch word test will be administered in five 20 word tests. The five days will span the following dates: May 28-31 and June 3-5. These tests will be researcher scored. All tests will be turned in to this researcher at the end-of-the-day of June 5.

Experimental Group's Lesson Plans--20 minutes/day

Mon. Words introduced by teacher using flash word cards. Hold card up to say word; class repeats orally. Teacher spells word, noting letter sequence and using in a sentence. Flash card is put down. Word is repeated and the students are asked to write word from memory. Word is immediately checked for accuracy. The student word list on the prepared ditto is sent home today.

Tues. Activity work sheet is presented. Students work through the sheet with teacher guidance. It is group checked. If time permits, a Spelling Bee Game (optional) can be played here. The class is divided into two teams. Use current spelling words and any previous ones (if any). A point is given to a team when a student correctly spells a word. After a student gets his/her turn he/she moves to the end of his/her line. The team with the most points after teacher ends game is the winner.

Wed. Practice test is given. Use Wed.' list and provide students with paper having them each number 1-10. Each word is said twice and used in a sentence. When the test is completed it is teacher checked, returned to the respective student and sent home.



Experimental Group's lesson plans continued:

Thurs. Second activity sheet for the week that has been provided is to be used. Follow Tuesday's format. After the work sheet has been completed and checked have the students either turn over the paper or provide handwriting paper for the two sentence dictation. Look for the correct date and corresponding sentences below. Check when completed and send to this researcher with end-of-week tests.

Fri. Week's Spelling test is given. Use designated list of words in the prescribed order. Say the word twice and use in a sentence. When students finish, collect and check. Record errors on tally sheet and note rewards, if any, on back of plans with date. Send tests to researcher by Monday afternoon upon completion of any make-up tests.

NOTE: WEEKLY ROUTINE IS THE SAME FOR THE 10 WEEKS.

Weeks that start on Tuesday will have a 30 minute lesson to cover Monday and Tuesday's materials.

SENTENCE DICTATION for Experimental Group

Every Thursday.

Feb. 14. The two yellow balls will stop and go.

The little cat did run away from him.

Feb. 21. Put the black hat on him.

He said to come and help by three.

Feb. 28. Ask her not to jump.

He and she ate too much cake.

Mar. 14. I am going into it.

Ask all just to call before going.

Apr. 18. Around here we get to run and play.

Two cats and four cats are six cats.

Apr. 25. They can ride up this walk.

Was one up here?

May 2. If that is out then this is in.

No blue hats for me.

May 9. Soon you can make the dog run and sit.

Its home is under the rock.

May 16. My big brown dog can see.

Look for your old cup.

May 23. Who will like some green apples?

We saw ten good shows.

CONTROL GROUP'S Skeletal Plan Sheet

(20 minutes/day) Week of: \_\_\_\_\_

Mon. Word list sent home.

Tues.

Wed. Practice Spelling test given, checked, and sent home with students.

Thurs.

Fri. End-of-week test given, checked, recorded, and turned in to this researcher after Mon. make-ups.

APPENDIX B

## List 1, #1.

yellow go stop two little      Fill in the missing  
 away today did him so      letters.

Find the words and circle them.

a h o x y s t u v w

l i t t l e r a x y

b m p w z p q w z a

c n y v s n o a b t

d m e t o d a y c w

e l l u a m l d e o

f k l p b d k h g f

g j o t c j i j g i

h t w s d i g d k o

s i q r e f h l m n

yellow      little

\_ellow      \_ittle

\_llow      \_ttle

\_\_\_ow      \_\_\_le

\_\_\_\_\_

so go did two

\_o \_o \_id \_wo

\_\_ \_ \_d \_o

\_\_\_\_\_

stop away him

\_op \_way \_im

\_\_p \_\_ay \_\_m

\_\_\_\_\_

today The sun is hot \_\_\_\_\_.

\_\_day

\_\_ay

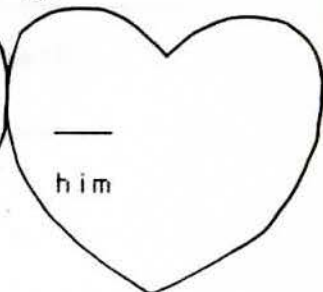
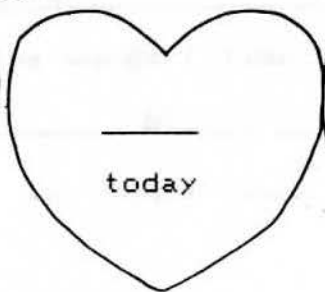
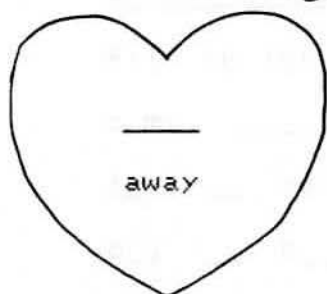
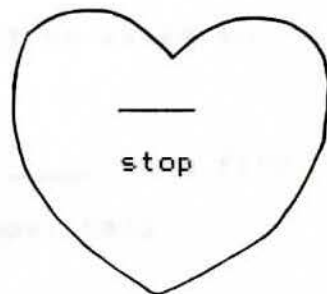
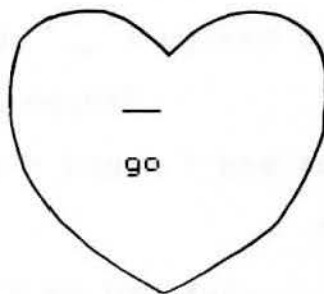
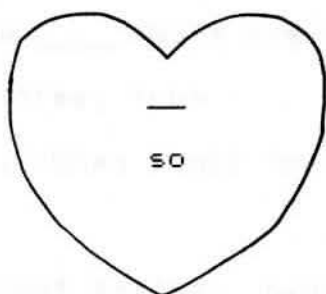
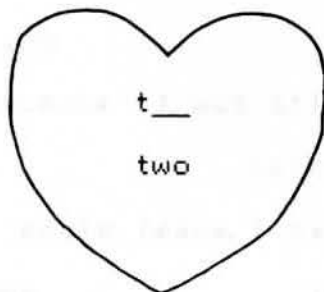
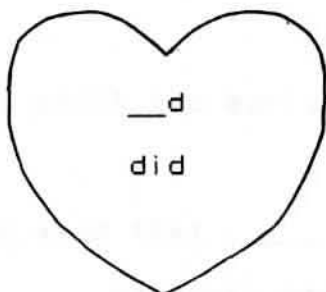
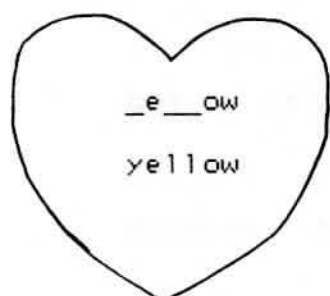
\_\_\_\_\_

## List 1 #2

Fill in missing letters on top line. Cut around hearts and through the middle. mix hearts on top of desk then match.

---

yellow did two so go stop away little today him



List 2, #3

come help as to black before by on said three

Put the correct spelling words in this story.

One day Becky and David \_\_\_\_\_ that I could \_\_\_\_\_ to  
 \_\_\_\_\_ said, saad \_\_\_\_\_ com, come  
 to their house to play. It was \_\_\_\_\_ a Saturday. When I  
 \_\_\_\_\_ on, no  
 got up it was still too early because it was still \_\_\_\_\_  
 \_\_\_\_\_ back, black  
 outside. Mom said that \_\_\_\_\_ I could leave I had \_\_\_\_\_  
 \_\_\_\_\_ beefour, before \_\_\_\_\_ two, to  
 eat. On my way to their house I passed \_\_\_\_\_ the park. I  
 \_\_\_\_\_ buy, by  
 saw \_\_\_\_\_ boys playing. \_\_\_\_\_ I walked by they waved to  
 \_\_\_\_\_ three, tree \_\_\_\_\_ As, Ask  
 me. When I got to their house I had to \_\_\_\_\_ them find  
 \_\_\_\_\_ hope, help  
a lost kitten. Finally we had fun.

Fill in the blanks and write the words 1 time each.

c\_me, \_\_\_\_\_ a\_, \_\_\_\_\_ thr\_\_\_\_, \_\_\_\_\_ bl\_\_\_\_, \_\_\_\_\_  
 t\_, \_\_\_\_\_ bef\_\_\_\_, \_\_\_\_\_ \_n, \_\_\_\_\_ s\_d, \_\_\_\_\_  
 b\_, \_\_\_\_\_ h\_p, \_\_\_\_\_.

## List 2, #4

come black before said by three help as to on

What is the Spelling word that rhymes with these words?

The underlined letters need to be changed or left off.

some \_\_\_\_    has \_\_\_\_    tree \_\_\_\_    do \_\_\_\_  
yelp \_\_\_\_    con \_\_\_\_    Ted \_\_\_\_    fly \_\_\_\_  
tack \_\_\_\_    adore \_\_\_\_

---

Unscramble these words.

moec \_\_\_\_    yb \_\_\_\_    lkacb \_\_\_\_    ot \_\_\_\_  
 reeth \_\_\_\_    orfbee \_\_\_\_    phle \_\_\_\_  
 dasi \_\_\_\_    no \_\_\_\_    sa \_\_\_\_



## List 3, #5

not jump pretty she too down her ask  
 \_\_\_\_\_ fly he \_\_\_\_\_

Circle the spelling words in each row.

not not knot lot not dot not mot  
 she bee she he tree she lee she  
 pretty witty silly pretty city pretty  
 down clown town down round down  
 jump jump clump jump plump jump slump  
 too zoo boo too new due blue too to  
 ask task ask mask ask ask lass  
 he see knee he the he see he  
 her fur her purr her mere slur her  
 fly tie my fly sky shy try fly buy

Unscramble the Spelling words then write them 2 times.

eh \_\_\_\_\_mpuj\_\_\_\_\_

ont \_\_\_\_\_oto\_\_\_\_\_

ehs \_\_\_\_\_sak\_\_\_\_\_

ttepry \_\_\_\_\_rhe\_\_\_\_\_

noes \_\_\_\_\_yfl\_\_\_\_\_

## List 3, #6

pretty fly down jump too ask

not she her he

Match the Spelling words.

Fill in the missing

not fly

letters. \_\_\_\_\_

jump her

\_ot \_er

she too

\_e \_ump

too ask

\_e \_oo

pretty he

\_ly \_sk

ask not

\_etty \_own

fly jump

he down

down she

her pretty

Fill in the blanks with Spelling words.

\_\_\_ has a \_\_\_\_\_ new doll.

Can the doll \_\_\_ up and \_\_\_?

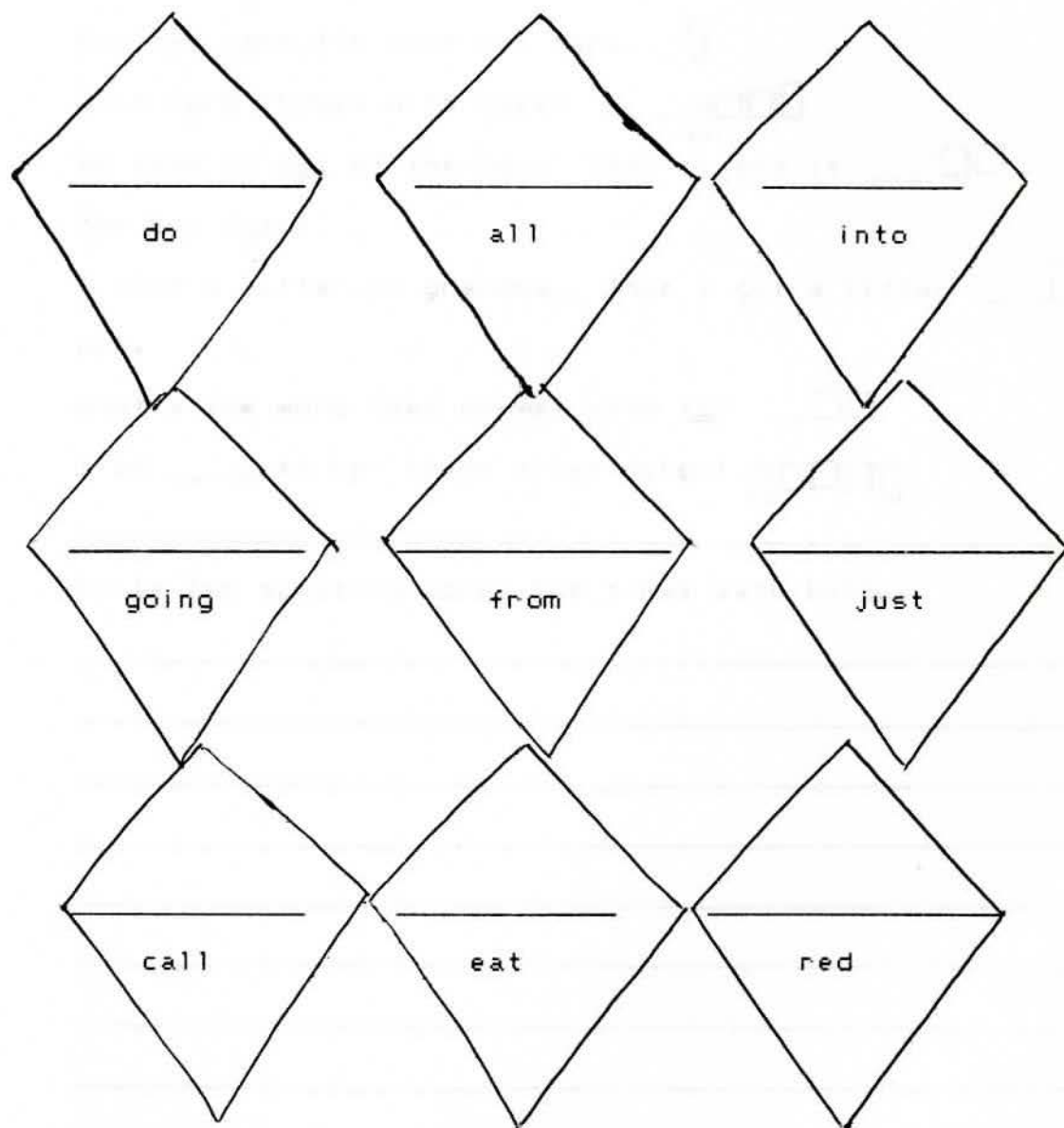
\_\_\_ him if that plane can \_\_\_.

It is \_\_\_ \_\_\_ late to be outside.

\_\_\_ will give that pencil to \_\_\_.

## List 4, #7

Write the spelling word above the line inside the kite.  
Cut around the kites and through the middle. Mix the  
pieces on your desk and then match.



Write the spelling words below.

## List 4, #8

do all into red going eat from I just call

Which two spelling words rhyme?

\_\_□□□ , \_\_□□□□

What is the color word? \_\_□□□

Another name for your own name. \_□

What word rhymes with rust? \_\_□□□□

He took it out of the box. Then he put it \_\_□□  
the box again.

I sent a letter to grandma. Then I got a letter \_\_□□□□  
her.

What's the word that rhymes with to? \_\_□□

I am \_\_□□□□□ to her house after school.

Write the spelling words two times each below.

---



---



---



---



---



---



---



---



---



---

## List 5, #9

around sleep play here run get six yes is four

Find and circle the spelling words.

a c f g r h t e d b

n r m u l e k j s i

p q o r g s t u l v

z f y u x r u n e w

h g f e n d c b e a

i j p k l d m n p o

p q l r s t h y u v

z y a s i x e x e w

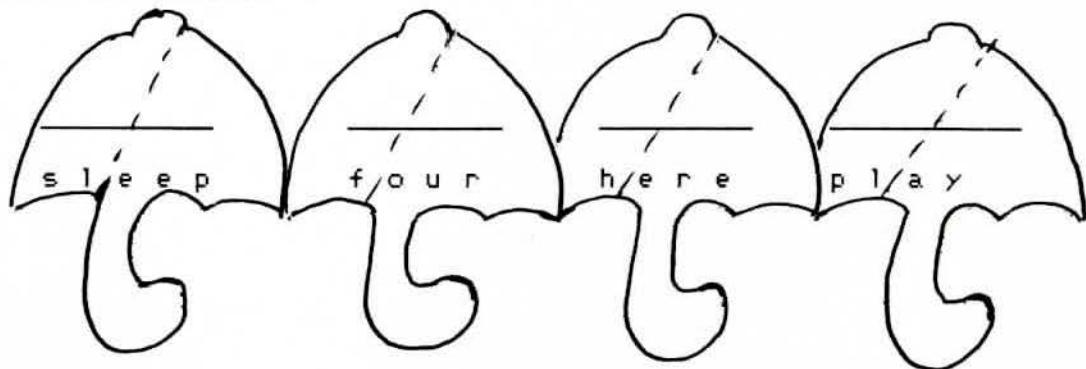
a b y c d e r f g s

n m l i s k e j i h



### April Showers Bring May Flowers

Write the spelling word on the line above the word. Cut around umbrellas and up along inside line. Mix on desk and then match.



List 5, #10

around four yes get here sleep play run is six

Write the sentence using these words: and He can run  
around play here.

\_\_ \_n \_\_l\_\_ \_\_d r\_\_ \_\_\_\_d \_\_e.

---

What are the missing letters in these words?

\_s s\_x \_\_ay \_\_eep he\_e fou\_ ar\_\_nd.

---

Finish these words.

run get yes

\_un \_et \_es

\_n \_t \_s

\_\_ \_\_ \_\_

---

What are the number words?

□□□□                      □□□

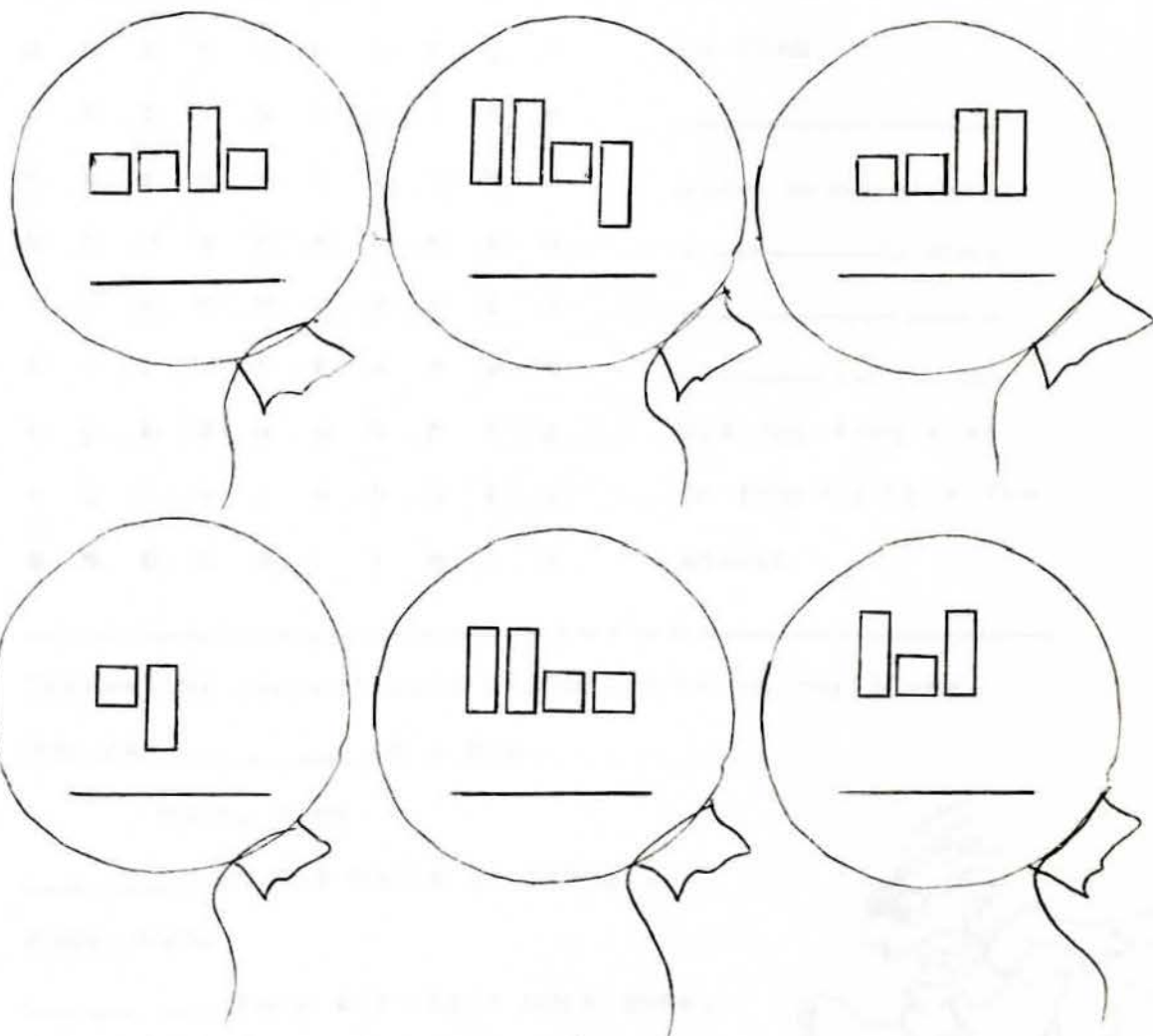
\_\_ take away \_\_ = two.

## List 6, #11

ride they are had can walk this was one up

Use these words to write in the balloon boxes:

walk had this up ride they



Write these words 2 times each:

w a s \_\_\_\_\_ c a n \_\_\_\_\_

o n e \_\_\_\_\_ a r e \_\_\_\_\_

## List 6, #12

ride walk up can are they this was one had

Find the words and circle them. Write the words that

a q r n p m l k j i have the letter A

p b a s o h h r g f in them.

o c c y s n a i d e \_\_\_\_\_

x n e a y t c d b t \_\_\_\_\_

u h w a l k u e a h \_\_\_\_\_

t v w m d z y v z i \_\_\_\_\_

t s r o l e a x w s \_\_\_\_\_

u p o n p q k r f q Did you find five

n b l e j e h j e g or four? circle the

a m c k d i f g i h answer

Choose the correct word and write it in the blank.

You can \_\_\_\_\_ on a bus.

walk, ride

\_\_\_\_\_ in the halls at school.

Ride, Walk

\_\_\_\_\_ have all their work done.

They, This

The sun is \_\_\_\_\_ in the sky.

up, down





## List 7, #13

but that blue me his then no if out in

Circle the correct spelling word and write it in the blank.

The game belongs to \_\_\_\_\_. me, his

I like that color of \_\_\_\_\_ paint. but, blue

Give the dog a bath \_\_\_\_\_ the tub. in, out

Put the fish \_\_\_\_\_ the tank of water. in, out

You can watch TV \_\_\_\_\_ not past nine o'clock. but, that

\_\_\_\_\_ you go outdoors wear a coat. If, His

The doctor is \_\_\_\_\_ to lunch. in, out

\_\_\_\_\_ picture is nice but this one is nicer.

That, This

First we are going to the playground and \_\_\_\_\_ we

will get icecream. that, then

The sign said \_\_\_\_\_ pets in the store. no, in

The boy found \_\_\_\_\_ lunch ticket on the floor.

him, his

## List 7, #14

but that blue me his then no if out in

Circle the correct spelling word in each line:

but bbut but buut but tub

that thib that tkat taht

blue blew blue blue eulb'

me ne mi me my me em

his has nis his hus has

then than then thwn then

no on oon nno mo no

if ef zf tf lf if if

out owt out aut tuo out

in en im in lm in jn

Write a sentence for each of

these words: that, then,

me, his.

Find the spelling  
words and circle  
them. \_\_\_\_\_

a s t t h a t u t s

r b t u n o p i q r

v u c b v m l k n j

o w q d l w i h g f

y x h p e u x e n o

z a b i o f e y s d

f e d c s n g i z c

g t h e n m h m a b

h i k l o p l e h j

i j f m n b u t k i

---



---



---



---



---



---



---

## List 8, #15

the make will under and its soon you at long

Look at the way its is used.

1. Its home is under the rock.
2. Its name is Kermit the Frog.
3. Its mushroom home has been eaten.

(Think of some more sentences using its and share them with the class.)

---



---

Circle all the spelling words . Color yellow all the circled letters.

---

y a b c d e f g h e  
 i o j k l m n o h p  
 q r u n d e r t s t  
 u v m w i l l s w x  
 y z b a c d o e f q  
 g h i t k o n j k l  
 m n o a n e g p q r  
 s t s u v w x a y z  
 a t b c g i k m n p  
i d e f h j l n o d

Fill in the missing letters.

make under long  
 m\_k\_ \_nd\_r l\_ng  
 \_\_\_\_\_

the its you and  
 th\_ \_ts y\_ \_nd  
 \_\_\_\_\_

List 8, #16

its soon you under make at long and will the

Match your spelling words after you fill in the missing letters below. \_\_\_\_\_

Fill in the blanks.

- i \_ s                    \_ o u
- s \_ \_ \_                  \_ a \_ e
- y \_ \_                    \_ t
- u \_ \_ e r                \_ \_ n g
- m \_ k \_                  i t \_
- a \_                        \_ n d
- l o \_ \_                  \_ o o \_
- a \_ \_                    \_ \_ \_ e r
- w \_ \_ \_                  \_ \_ e
- t \_ \_                    \_ i \_ \_

- 1. \_ \_ \_ \_ it will be 4:00.
- 2. \_ \_ \_ clock is ticking.
- 3. \_ \_ four o'clock we will go home.

(The, At, Soon)  
+++++

\_\_\_\_\_

\_ \_ \_ \_ me a picture of what time the clock on the classroom wall is now.

You \_ \_ \_ I can play together outside.

\_ \_ \_ \_ you share your game with me?

oo

Make two sentences using under and long.

\_\_\_\_\_  
\_\_\_\_\_

## List 9, #17

my your look be old brown for big see cold

Find the spelling word that rhymes with these words and write it.

tie \_ \_ Draw a picture of a ( \_ i g), ( \_ l d),

town \_ \_ \_ \_ ( \_ \_ l d), ( b r \_ \_ \_ ) bear below.

sure \_ \_ \_ \_

bold \_ \_ \_ \_

fold \_ \_ \_

book \_ \_ \_ \_

bee \_ \_ \_

me \_ \_

door \_ \_ \_

wig \_ \_ \_ Bears \_ \_ \_ friendly but are mean.

But \_ \_ teddy bear is nice and sleeps close to me at night.

\_ \_ \_ \_ teacher might have a storybook about bears.

\_ \_ \_ if you can get her to read one today.

Smokey the Bear wants you to: (think of some camping rules and tell the class).

## List 9 #18

my for be cold brown look see your big old

Choose the correct spelling word.

\_ \_ \_ \_ dog will bite \_ \_ \_ \_ leg if you  
 \_ \_ \_ \_ k like you'll hurt me. So even though he is  
 \_ \_ \_ \_ d remember he's b \_ \_ \_ . And if you s \_ \_ \_ my  
 dog looking at us you'd better \_ \_ \_ \_ nice to me.

oo

Make a sentence using the word cold.

---



---

Find the spelling words and circle them.

c o l d j l e p q r

a i h g k e m m y s     Draw a picture of an o \_ \_ shoe

b c e f s n o t u v     and what you might s \_ \_ on it.

d b r o w n z y x w

i h g f e d b c b a

j b e k l f m i n o

v u t s y o r q g p

l o o k o r a b c d

w x y z u d e f l g

o n m l r k j o i h

## List 10 #19

good saw green some ten myself who an we like

Find the correct spelling words and circle them.

good good goad good godd good pood good

saw was aws saw saa saw saas saw see

green green grein geern green green neerg

some soem smoe some some some smoe smos some

ten itn tin ten tene den ten len jen ten net

myself mycelf mysell myself myself miself

who wha woh who wwh who wha who ohw wwo

an am aa an an na an en nn an am an an

we we me ce ae ue ew eu we we see me we

like kek lid lik keke lloe like like ljke

aa

Finish these sentences.

A \_ \_ \_ \_ \_ lawn looks \_ \_ \_ \_ \_ .

Bob and \_ \_ \_ \_ \_ will play a game.

\_ \_ \_ can help me find my lost cat?

\_ \_ would \_ \_ \_ \_ some more icecream, please.

There are \_ \_ \_ fingers on your hands.

\_ \_ apple is a tasty snack.

I s\_ \_ some green apples on that tree.

List 10 # 20

good green an myself ten saw who some like we

aa

Use the space below to write a make-believe story.

Use these words. Your rocket from Earth has just crashed into a far away planet. Describe the creatures who live there and how they help you return to Earth.



A series of horizontal lines for writing, starting with a wavy line that curves down from the text. On the right side, there is a hand-drawn illustration of a hand holding a small globe with a smiley face on it.



1977

The following information will be required for the  
 reporting period. It is requested that you provide the  
 information requested in the attached. The first part  
 of the form will be completed by you. The second part  
 of the form will be completed by the agency. All  
 information will be for internal use only. For the practice  
 year, 1977-1978, the information requested and what  
 has been submitted is as follows. The information  
 submitted is as follows. The information submitted  
 is as follows. The information submitted is as follows.

APPENDIX C

The following information will be required for the  
 reporting period. It is requested that you provide the  
 information requested in the attached. The first part  
 of the form will be completed by you. The second part  
 of the form will be completed by the agency. All  
 information will be for internal use only. For the practice  
 year, 1977-1978, the information requested and what  
 has been submitted is as follows. The information  
 submitted is as follows. The information submitted  
 is as follows. The information submitted is as follows.

The following information will be required for the  
 reporting period. It is requested that you provide the  
 information requested in the attached. The first part  
 of the form will be completed by you. The second part  
 of the form will be completed by the agency. All  
 information will be for internal use only. For the practice  
 year, 1977-1978, the information requested and what  
 has been submitted is as follows. The information  
 submitted is as follows. The information submitted  
 is as follows. The information submitted is as follows.

February 6, 1985

Dear Parents,

First grade classes will be beginning a 10 week Spelling Program. Please look for the list of 10 words for the scheduled week on Mondays. The first list will be sent home on February 11, 1985. You will have the option to help your child study these words at home. Wednesday will be the designated day for the practice test. Each test will be teacher corrected and sent home that day with your child. This test will not be graded. On Friday, however, the test will be graded and not sent home. At the end of fourth quarter, your child will receive a Spelling grade based on the 10 lists.

Monday of each scheduled week will be the only make-up day for a student, who due to illness was absent from Friday's test. All end-of-week tests for each student will be part of the data which Mrs. Lois Evans, a first grade teacher and graduate student at Lindenwood College, will be analyzing as part of her Master's Project. Each student will remain anonymous.

Thank you for your cooperation and understanding.

- 1. The first part of the report...
- 2. The second part of the report...
- 3. The third part of the report...
- 4. The fourth part of the report...
- 5. The fifth part of the report...
- 6. The sixth part of the report...
- 7. The seventh part of the report...
- 8. The eighth part of the report...
- 9. The ninth part of the report...
- 10. The tenth part of the report...

APPENDIX D

- 1. The first part of the appendix...
- 2. The second part of the appendix...
- 3. The third part of the appendix...
- 4. The fourth part of the appendix...
- 5. The fifth part of the appendix...
- 6. The sixth part of the appendix...
- 7. The seventh part of the appendix...
- 8. The eighth part of the appendix...
- 9. The ninth part of the appendix...
- 10. The tenth part of the appendix...

APPENDIX E

- 1. The first part of the appendix...
- 2. The second part of the appendix...
- 3. The third part of the appendix...
- 4. The fourth part of the appendix...
- 5. The fifth part of the appendix...
- 6. The sixth part of the appendix...
- 7. The seventh part of the appendix...
- 8. The eighth part of the appendix...
- 9. The ninth part of the appendix...
- 10. The tenth part of the appendix...

Spelling Experiment's end-of-unit information

1. Turn in plan folders to Evans by Wednesday, May 29.
2. Evans will xerox tally/grade sheets for grade books.
3. For cumulative tests staple 5 sheets of writing paper together for each student's end-of-year word retention test.
4. Tuesday, May 28, will be the first day of the five 20 word tests. Each child should put his/her last, first name at the top of each sheet. And make a E (for experimental group) or C (control group) next to his/her name. Each student will need to number each of the five pages to 20.
5. The order and words for each of the 5 tests are given on the attached sheet. For each test repeat each word twice and use in a sentence any homonyms.
6. Test dates are: May 28, Tues.-- test 1; May 29, Wed.-- test 2; May 30, Thurs.--test 3; May 31, Fri.--test 4; and June 3, Mon.--test 5.
7. Send all class booklets ungraded to Evans by June 4.

DO NOT DO MAKE-UPS

DO NOT GIVE TEST TO ANY STUDENT FORMERLY EXCLUDED

Thank you for your help,

Lois Evans

Spelling End-of-year Retention of 100 Dolch Words

List 1	List 2	List 3	List 4	List 5
5/28	5/29	5/30	5/31	6/3
1. yellow	1. not	1. around	1. but	1. my
2. so	2. she	2. here	2. then	2. brown
3. did	3. pretty	3. is	3. that	3. your
4. two	4. down	4. yes	4. no	4. for
5. go	5. jump	5. get	5. blue	5. look
6. stop	6. too	6. six	6. if	6. big
7. away	7. ask	7. play	7. me	7. be
8. little	8. her	8. four	8. out	8. see
9. him	9. he	9. sleep	9. his	9. old
10. today	10. fly	10. run	10. in	10. cold
11. come	11. do	11. ride	11. its	11. good
12. to	12. all	12. they	12. soon	12. saw
13. before	13. into	13. can	13. you	13. green
14. said	14. red	14. was	14. at	14. some
15. help	15. going	15. one	15. long	15. ten
16. black	16. eat	16. had	16. and	16. myself
17. on	17. from	17. up	17. under	17. who
18. by	18. I	18. are	18. will	18. an
19. three	19. just	19. this	19. make	19. we
20. as	20. call	20. walk	20. the	20. like

## REFERENCES

- Blake, H. E., & Emans, R. (1970). Some spelling facts. Elementary English, 47, 241-248.
- Campanale, E. A. (1962). Survey methods in the teaching of spelling. Elementary English, 39, 446-455.
- Cook, R. C. (1957). Evaluation of two methods of teaching spelling. The Elementary School Journal, 58, 21-27.
- Cramer, R. L. (1970). An investigation of first grade spelling achievement. Elementary English, 47, 230-237.
- Eisman, E. (1962). Individualizing spelling. Elementary English, 36, 478-480.
- Evans, J. D. (1985). Invitation to psychological research. New York: CBS College Publishing.
- Finch, H. (1952). Ideas on teaching spelling. The English Journal, 41, 298-302.
- Funk, H. D. (1972). Improving the spelling program. Peabody Journal of Education, 49, 285-289.
- Furness, E. L. (1958). Psychological determinants of spelling success. Education, 79, 234-239.
- Gates, A. I. (1931). An experimental comparison of the study-test and test-study methods in spelling. Journal of Educational Psychology, 22, 1-19.
- Groff, P. (1978). Vowel letters and word recognition by beginning readers. Journal of Reading Behavior, 10, 197-199.
- Hall, N. (1962). Individualize your spelling instruction. Elementary English, 39, 476-477.
- Hanna, P. R., & Hanna, J. S. (1965). The teaching of spelling. National Elementary Principal, 45, 19-28.

- Hanna, P. R., & Moore, J. T. (1953). Spelling from spoken word to written symbol. Elementary School Journal, 53, 329-337.
- Hawley, W. E., & Gallup, J. (1922). The list versus the sentence method of teaching spelling. Journal of Educational Research, 5, 306-310.
- Jackson, J. (1953). The influence of word analysis upon spelling attainment. Journal of Educational Research, 45, 107-115.
- Kirk, R. E. (1968). Experimental design: Procedures for the behavioral sciences. Belmont, California: Brooks/Cole.
- Kottmeyer, W. (1952). On the relationship of word perception skills in reading and in spelling. Education, 72, 600-603.
- McMullen, D. W. (1973). Minimal contrast, spelling patterns, and initial reading. Journal of Reading Behavior, 5, 252-258.
- Nikas, G. B. (1970). Initial teaching alphabet and traditional orthography -- their impact on spelling and writing. The Elementary School Journal, 70, 321-330.
- Novicky, W., Dorocak, S., Faulhaber, M., Himes, M., McNerney, K., Petruziello, R., & Wolfert, R. (1975). Growth in spelling. Irvine, CA: Laidlaw Brothers.
- Plessas, G. P., & Petty, W. (1962). The spelling plight of the poor readers. Elementary English, 39, 463-465.
- Rudorf, E. H. (1970). Review of "An investigation of first-grade spelling achievement by R. L. Cramer." Elementary English, 47, 238-240.
- Sand, H. J. (1938). An evaluation of the effects of marks as incentives to pupil growth in spelling ability and of the comparative values of equated scales and informal tests as measurements of the progress. Journal of Educational Research, 31, 678-682.

Schoephoerster, H. (1962). Research into variations of the test-study plan of teaching spelling.

Zifcak, M. (1981). Phonological awareness and reading acquisition. Contemporary Educational Psychology, 6, 117-126.



## Note

<sup>1</sup> This researcher would like to thank Dr. James D. Evans for his guidance and assistance in the computation and interpretation of the statistics used in the thesis.

