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The effect of cooperative learning on the spelling achievement of fourth grade students

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THE EFFECT OF COOPERATIVE LEARNING ON

THE SPELLING ACHIEVEMENT OF FOURTH GRADE STUDENTS

by
Elisabeth Henjes

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ABSTRACT

Author: Elisabeth Henjes
Title: The Effect of Cooperative Learning on the Spelling Achievement of
              Fourth Grade Students
Year: 1999
Advisor: Dr. Robinson
Degree: Master of Science in Teaching
University: Rowan University

This research was designed to study the effect of cooperative learning instructional strategies as compared to traditional spelling instruction on fourth grade achievement in spelling. Comparisons were made between the spelling achievement of thirteen, fourth grade students, when they were taught by cooperative learning strategies and the spelling achievement of these same fourth grade students when they were taught by traditional spelling instructional methods. The cooperative leaning instructional methods used were a combination of Classwide Peer Tutoring and Student Teams- Achievement Division (STAD). To control for certain variables a second treatment of traditional spelling instructional methods was implemented after the cooperative learning spelling instruction.

A variation of the one-group, pretest-posttest, pre-experimental design was used for this study. A series of t-tests for nonindependent samples were used to analyze the difference in the achievement of the students after using the differing treatments. Statistical analysis was performed at the $p=.05$ significance level. This study indicated a significant difference in the scores of the students in favor of using cooperative learning spelling instruction over traditional spelling instruction. This study supported the results of previous studies that have also shown a favorable significant difference when using cooperative learning to teach spelling as well as other subjects.

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This research was designed to study the effect of cooperative learning instructional strategies and traditional spelling instructional strategies on fourth grade achievement in spelling. A series of t-tests were used to analyze the difference in the achievement of the students after using the differing treatments. Statistical analysis indicated a significant difference in the scores of the students in favor of using cooperative learning spelling instruction over traditional spelling instruction.

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Chapter I
Scope of the Study

Introduction

The ability to spell is an integral part of the ability of people to communicate their ideas and to be taken seriously in today's society (Bollman, 1991). Bolton and Snowball note that "accurate spelling is highly valued by society" (Bolton and Snowball, 1993, p. 2). However, spelling is a subject that many teachers as well as students do not enjoy because its presentation is often rote and boring (Topping, 1995).

Despite the introduction of new techniques, students in many classrooms are still being taught spelling through the traditional approach of being given a list of words at the beginning of the week and then being tested at the end of the week. This is often done with no class time set aside for studying (Gettinger, 1993; Lane, 1997; Pennington, 1995, Graham, 1983).

Why do children need to be taught spelling? According to Sandra Wilde, teachers have an obligation to ensure that children are able to express themselves in writing. Spelling appropriately helps children express themselves strongly and effectively (Wilde, 1996).

Statement of the Problem

The goal of the study was to investigate whether techniques other than the traditional approach to spelling instruction might be effectively utilized for spelling instruction. This study investigated the effect of cooperative learning on the spelling achievement of fourth grade students. The questions was, "Would there be a difference

in spelling achievement when children used cooperative learning methods instead of traditional spelling instruction methods?"

Hypothesis

The hypothesis of this study was that there would be no significant difference in the spelling achievement of fourth grade students, when they were taught by cooperative learning strategies as compared to the spelling achievement of these same fourth grade students when they were taught by traditional spelling instructional methods.

Limitations of the Study

There were several limitations to this study. One limitation was that the researcher was limited to an assigned classroom. There was only one fourth grade classroom in the school where the study was to be implemented. The subjects were not randomly selected and the size of the sample was limited. As a result of this limitation, the results of this research are not generalizable to another population.

The treatment design did not include a control group. Instead the same group was administered two treatments. When only one group is introduced to two or more treatments, it is possible for differences that occur after the first treatment to effect the outcome of subsequent treatments. In other words there may be a cumulative effect which is called multiple treatment interference.

A third issue was the fact that the researcher was also acting in the capacity of the classroom teacher. Objectivity of the researcher tends to be susceptible when this occurs. Bias, in terms of how the researcher teaches the subject, as well as in terms of the observations the researcher made, may have occurred.

Definitions of Terms

Four terms must be defined in order to fully understand this research.

Cooperative learning strategies refers to students working together to learn material or complete a project. In this research a combination of the Student Teams-Achievement Division (STAD) approach and the Classwide Peer Tutoring (CWPT) approach were utilized as cooperative learning techniques.

Traditional instructional methods refers to the practice of teaching spelling words by giving children a list of words on Monday, allowing them to study on their own, and testing them on Friday.

History refers to events that occur during the implementation of treatment, which are not parts of the treatment, but may affect the performance of the subjects.

Maturation refers to changes that occur within the subjects over a period of time and may affect the performance of the subjects. Maturation is more typically a problem when a study lasts for a long duration.

Chapter II

Review of the Related Literature

Introduction

This research was designed to study the effect of cooperative learning

instructional strategies on fourth grade achievement in spelling. Students were taught

spelling using traditional spelling instructional methods and tested. The same group of

students were then taught spelling using cooperative learning instructional strategies and

tested.

Cooperative Learning

"If our future generations are to behave rationally across the full range of
social situations, our classrooms must include cooperative, interdependent
learning situations along with competitive and individualistic learning
situations.... It would be as foolish to prepare students to be only
cooperative as it would be to prepare them to be only competitive (Kagan,
1994, p. 1:2)."

Cooperative learning is an area that has received substantial research in the last

two decades and it has been shown to be an effective instructional strategy (Slavin, 1995).

Slavin reported that in comparisons of 67 studies on the achievement effects of

cooperative learning, 41 showed a significant increase in achievement of students

involved in cooperative learning over those in control groups (Slavin, 1991). There are

however, a wide variety of cooperative learning strategies being used and some are more

effective than others are (Slavin, 1989). "Cooperative learning refers to a set of

instructional methods in which students are encouraged or required to work together on academic tasks (Slavin, 1987, p. 1161)."

Research has indicated that both teachers and students feel that there are academic and social benefits of working in groups and many classrooms have adopted cooperative learning strategies to some degree (McManus and Gettinger, 1996; Slavin, 1987; Kambiss, 1990). A study by C. M. Mulryan (1995) indicated that students spent more time on-task and were more active participants in cooperative learning than whole class instruction. In another study children who received cooperative training were more cooperative and helpful to each other (Ashman & Gillies, 1997). Three teachers reported that with a combined total of 23 years using cooperative learning strategies they were confident that it had promoted higher achievement and improved social skills in their classrooms (Augustine, Gruber, & Hanson, 1989). Patricia Kambiss states that, "research has shown that cooperation among adults promotes achievement, social support, and self-esteem...Cooperative learning can influence peer pressure, encourage classmates to succeed, and provide an increase in self-esteem (Kambiss, 1990, p. 1)."

Johnson, Johnson & Scott (1978) examined the effects of cooperative versus individualized instruction on the attitudes and achievements of fifth and sixth grade students. They found that students were more accurate and worked faster when involved in cooperative versus individualized instruction. They further noted that the advantages of cooperative learning increased as the material became more difficult and the students gained more experience with cooperative learning.

In another study done by Johnson, Skon, & Johnson (1980) the effects of cooperative, competitive, and individualistic conditions on first graders problem solving performance were compared. The authors defined the terms above as follows. Cooperative conditions are when the success of an individual leads to success of the group. Competitive conditions are when the success of an individual leads to the failure of the other members of a group. Individualistic conditions are when the success of an

individual has no effect on the success or failure of others. The authors found that students consistently performed better using cooperative versus competitive or individualistic conditions. There was no significant difference between the competitive versus the individualistic conditions (Johnson, Johnson, & Skon, 1980).

There are many different ways that students can work together. Slavin differentiates between two primary cooperative learning methods. The cooperative incentive structure involves a structure where two or more students will share in a reward if they are successful as a group. Cooperative task structures involve two or more students, allowed, required, or encouraged to work together on a task in order to complete the task. Slavin states that cooperative learning methods always involve cooperative tasks but they do not always involve cooperative incentives (Slavin, 1983).

Slavin further states that cooperative task structures can be divided into two categories and cooperative incentive structures can be divided into three categories. The two types of task structures are task specialization and group study. In task specialization, each member of the group is responsible for a different part of the activity. In group study, group members do not have specific tasks and all members study together. The three types of incentive structures are group reward for individual learning, group reward for group product, and individual reward based on individual performance (Slavin, 1983).

Further research into cooperative learning practices has indicated that there are two specific elements that have been evaluated as being essential to making cooperative learning work. Those two elements are group rewards and individual accountability (Johnson & Johnson, 1994; Kagan & Kagan, 1994; Slavin, 1987, 1994). Research has shown that both of these elements must be present because those methods that use only group goals without individual responsibility have been ineffective in increasing student achievement (Slavin, 1989).

Simply placing students in groups does not ensure that they will work together,

however if the students know that they will be rewarded as a group, they will be more likely to work together towards the goal (Slavin, 1991). Slavin also notes that it is imperative that the goal must be important and meaningful to all members of the group if it is to be motivating to the students (Slavin, 1989).

Individual accountability ensures that all students learn the required material. If there is no individual accountability, often the stronger students in the group will learn the material, the whole group will receive the reward, and the weaker students will not have made any achievement (Slavin, 1991).

Dr. Spencer Kagan differentiates between three schools of cooperative learning. The Learning Together approach involves five key areas of focus: positive interdependence, face-to-face interaction, individual accountability, interpersonal skills and group processing. Learning Together can be used in any subject area and at any grade level (Kagan, 1994).

Student Teams-Achievement Division (STAD) differs from Learning Together in that Learning Together involves a group reward for group product while STAD involves a group reward for individual learning (Slavin, 1983). STAD was developed and researched at Johns Hopkins University (Slavin, 1994). Central components of STAD are individual accountability, team rewards, and equal opportunities for success. In STAD, students are assigned to four member heterogeneous groups that work together to learn teacher presented material. After learning the material the team members are quizzed individually (individual accountability). Group rewards are based on the individual improvements within the group (equal opportunities for success). Slavin reports that research has found this to be an effective method of teaching across grade levels and subject areas. It is most appropriately used for teaching well-defined objectives with only one correct answer (Slavin, 1995).

Teams-Games Tournaments (TGT) is identical to STAD except that the quizzes normally used to determine individual learning are replaced with academic game

tournaments. Dr. Kagan relates some concerns regarding TGT for lower achieving and minority students (Kagan, 1994).

Team Assisted Individualization and Cooperative Integrated Reading and Composition represent the second school of thought discussed by Kagan. Kagan terms these as Curriculum Specific Packages. These packages include curriculum specific materials specifically designed for cooperative learning. Curriculum Specific Packages involve very specific materials and cooperative learning strategies (Kagan, 1994).

Team Assisted Individualization (TAI) is another method of cooperative learning developed at Johns Hopkins University. TAI combines individualized instruction with cooperative learning and is used to teach mathematics. Students in TAI work in 4-5 member heterogeneous groups. They help each other and check each other's work. Group rewards are based on the individual units the students in the group complete and independently taken final tests. Team checking of work frees the teacher to spend time teaching small groups (Madden, Stevens, & Slavin, 1986).

Applying what was learned from TAI and adapting it for reading, language, arts, and writing created Cooperative Integrated Reading and Composition (CIRC). Like TAI, CIRC utilizes individual instruction and heterogeneous groups. Because reading and writing skills contain many subskills that need to be taught using different strategies, CIRC is an extremely complex and specific form of cooperative learning (Madden, Stevens, & Slavin, 1986). TAI and CIRC both involve group reward for individual learning.

The final school of thought which Dr. Kagan discuses is the Structural Approach. The Structural Approach places emphasis the way that interaction between individuals is organized in the classroom. The structural approach is content-free which means that almost any subject area can be taught using this approach. After deciding on the interaction structure of the students, the teacher plugs in the content and that defines the activity. The primary functions of using the structural approach are class building, team

building, communication building, mastery and thinking (Kagan, 1994).

Peer Tutoring

Peer tutoring refers to; "a peer mediated instructional strategy designed to improve the basic skills performance of children who are low achievers, disadvantaged, minority and/or mildly retarded (Lane, 1997, p.4)."

Peer tutoring has become increasingly popular for three reasons. The first is the ease with which peer tutoring can be implemented, allowing for more individualized instruction and classroom management. The second is that research has shown peer tutoring procedures to be more effective than some conventional instruction. Finally, these procedures allow for increased appropriate peer-interactions (Kohler and Greenwood, 1990). Dr. Kagan notes that, "The desire to express oneself to a peer, a constant problem in the traditional classroom, is channeled in the cooperative classroom toward academic achievement (Kagan, 1994, p. 3:3)."

According to Delquadri, Greenwood, Whorton, Carta, & Hall (1986), one of the reasons that peer tutoring is so effective is that it increases student interaction and rate of responding. Research has indicated that often in traditional instruction children are not actively engaged. In one observation, one fourth grade student was actively engaged for only eight minutes of a 60-minute reading period. The rest of the time he sat alone at his desk and was involved in off-task behaviors.

A meta-analysis of 65 studies concluded that peer tutoring produces positive academic outcomes and social outcomes for both tutors and tutees (Kagan, 1994). One of the concerns about peer tutoring has been that it only benefits the tutee. Studies such as the one by Dineen, Clark, & Risley (1977), have indicated that tutoring a peer increases academic achievement of the tutor almost as much as being tutored. In this study the achievement effects of being tutored, tutoring a peer, and neither giving nor receiving tutoring were compared for each child in the study. The children's spelling improved

when they were tutored or tutored someone else but remained the same when neither occurred (Dineen, Clark, & Risley, 1977).

One of the most effective forms of peer tutoring is Classwide Peer Tutoring (CWPT). CWPT is a strategy that was developed at the Juniper Gardens Children's Project in Kansas City, Kansas, in 1983. Like the cooperative learning strategy, Student Teams-Achievement Division (STAD), CWPT involves competing teams, group rewards and direct practice. It also involves the implementation of highly structured teaching procedures. CWPT has been shown to be an effective strategy with a variety of academic subjects including spelling, with students in regular classrooms as well as children who are developmentally disabled (Mallette, Harper, Maheady & Dempsey, 1991).

Spelling Instruction

What is spelling?

"Spelling is a highly complex task that is gradually mastered over a period of time as an individual becomes acquainted with the properties and purposes of written language. It is not merely the memorization of words. Spelling involves the use of strategies which may vary according to the words being attempted and the knowledge that the writer has acquired through experiences with words (Bolton and Snowball, 1993, p. 2)."

"Spelling is a subject that allows for no creativity or differences of opinion. Only one spelling of a word is correct. It is a precise skill which is important yet difficult to master at any level of development (Bollman, 1991, p. 10)."

There is continuing debate on the most effective type of spelling instruction. While some educators believe that traditional spelling instruction has stood the test of time, others believe that traditional spelling instruction is a waste of time and students should only be taught the spelling of words as they are needed (Ediger, 1995). Research in the area of cooperative learning and spelling has not been extensive. However, although other tested techniques in spelling instruction have been shown to be effective

they are often not utilized in the classroom (Lane, 1997).

Steve Graham (1983) indicates seven research-supported considerations when teaching spelling. First, 60-75 minutes per week should be allotted for spelling instruction. Often, regular classroom instruction does not provide students with time to practice spelling words. If children are not given time to practice, it is not surprising that they do not learn (Pennington, 1995). In her 1995 study, Pennington found that students allowed to study with a partner for 20 minutes a day, and given direction on the method to use to study together, scored significantly higher on the end of the week spelling tests than those students who were not allowed a daily study period (Pennington, 1995). This leads to Grahams second consideration, time alone is not as effective as providing students with a procedure to follow during that time (Graham, 1983).

Graham also states that a pretest should be used so that students know which words they already know how to spell and which need further study. In his 1976 study, as reported by Lane (1997), Thomas Horn stated that testing students before studying, and having students study only those words that they misspelled resulted in error reduction of 50 percent.

Another technique that has been shown to be effective is the immediate correction of errors. If children are immediately corrected on the incorrect spelling of a word they will not spend time practicing the incorrect spelling (Gettinger, 1993; Mallette, Harper, Maheady & Dempsey, 1991; Lane, 1997). Betty Bollman notes that sometimes the desire to allow children to develop creatively overshadows the need for accurate spelling and children are not corrected when they spell words incorrectly (Bollman, 1991). "Due to the emphasis on composition and the factors that are involved in composing, spelling has been left alone and poor spellers have been left to face their own deficiencies and deal with them in any way they can (Bollman, 1991, p. 9)." Graham brings this a step further by stating that students should self-correct their errors with teacher direction. If students correct their own errors they are forced to write the word correctly, hence providing

further practice on the correct spelling.

Grahams final recommendations are that words should be presented in a list or column, words to be studied should not be divided into syllables, and the use of spelling games in addition to academic instruction help to promote interest and motivate students.

Elaine Fowler (1989) utilized two techniques, one using peer tutoring and the other using cooperative groups and found both to be effective in spelling achievement. For peer tutoring, students who scored above the class median were tutors and those who scored below were tutees. The tutors would say the word, use it in a sentence and repeat the word again as the tutee wrote the word. After all words were written the tutor spelled each words for the tutee. The tutee corrected each word and the process was repeated. The research has shown that both the tutor and tutee spelled more words correctly after this process than before and attitudes about spelling became more positive (Fowler, 1989).

The second method that Fowler reported on utilized cooperative groups. The class was divided into heterogeneous groups of five students. Low-spelling achievers were distributed throughout the groups. Groups were instructed that they were to complete exercises as a group, were encouraged to assist each other, and were told that each member needed to receive at least 80% on the test that they would take individually. If successful, a reward would be given to the group. Utilizing this method the low-spelling achievers improved by an average of 15.2 points and the number of perfect papers for the class increased by four times (Fowler, 1989).

In her 1990 study on cooperative learning and students achievement, Patricia Kambiss found that after a 12-week treatment, there was a significant difference in the spelling achievement of fourth grade students who were instructed using cooperative learning techniques, from those students who were instructed using traditional techniques (Kambiss, 1990).

Kristen Gruber utilized heterogeneous cooperative groups to teach third-grade

spelling for over ten years and reported that individuals and whole class spelling scores showed consistent improvement (Augustine, Gruber & Hanson, 1989).

In her 1985 study, Maribeth Gettinger examined the effects of student-directed versus teacher-directed spelling instruction, and the effects of visual and verbal cues on the spelling performance of poor spellers. The results of her study found that the most effective treatment was student-directed instruction with verbal and visual cues (Gettinger, 1985).

Chapter III

Procedure and Design of the Study

Introduction

This research was designed to study the effect of cooperative learning instructional strategies on fourth grade achievement in spelling. The students were taught spelling using traditional spelling instructional methods and tested. The same group of students were then taught spelling using cooperative learning instructional strategies and tested.

Population

The population for this study was fourth grade students from a small city in southern New Jersey. The students in this city attended one of three community schools, which were included in this walking district. Students were allowed to attend any of the three schools of their choice provided their families would arrange transportation.

The subjects were drawn from a small class of seventeen, nine and ten year old students. Four classified students left the room during the literacy period, so thirteen students (ten females and three males) were included in this research. Two of the students were African American and one student was an Iranian who had lived the majority of her life in America. The remaining ten students were Caucasian. The thirteen students ranged in academic abilities with four included in a gifted program and two receiving in-class support.

Experimental Design

This study utilized a variation of the one-group, pretest-posttest, pre-experimental design. This design involved only one group of subjects. These subjects were given a pretest, then introduced to a treatment, and given a posttest. The pretest and posttest scores were compared to determine whether there was a significant difference after the treatment. In this study the subjects were given three treatments. The first was traditional spelling instruction, the second was cooperative learning spelling instruction and the third was traditional spelling instruction. The success of the three treatments administered to the same subjects was compared.

The original pretest score consisted of the final grades on the students' previous three spelling tests. These were summed to obtain a pretest score for the introduction of the first treatment, traditional spelling instruction.

Traditional spelling instruction was utilized for the next three weeks during which time students were given a spelling test at the end of each week. The scores on these tests were summed to establish the posttest score for the three-week period.

The same students were then introduced to the second treatment, cooperative learning instruction. The students received the second treatment for a three-week period. The students were again given a spelling test at the end of each week and the scores were summed to obtain a posttest score.

The students then received traditional spelling instruction for another three-week period. Once again, students were given a spelling test at the end of each week and the scores were summed to obtain a final posttest score. Students received the traditional spelling instruction treatment for a second time to control for two sources of invalidity; history and maturation.

Given that all subjects in this study were receiving both treatments in the same order, the possibility of maturation or history influencing the results of the second treatment (cooperative learning) was strong. Therefore, the decision to implement the

traditional spelling instruction a second time was made so that the threats to these two sources of invalidity would be minimized.

Procedure

This study was implemented in the spring of 1999. Data gathering was initiated on March 1, 1999 and continued through May 7, 1999. During this time period the researcher was the student teacher for the classroom. By beginning the data gathering in March, the researcher was able to spend time getting to know the students in order to develop heterogeneous groups, previous to gathering the data.

Traditional Spelling Instruction # 1: Weeks 1-3. The students were given the list of spelling words on Monday. To control the variability of "in-class" study time, the students were given 20 minutes daily to study the spelling words. On Tuesday, Wednesday and Thursday the students were given study assignments to complete individually. These study assignments included; quizzing themselves, alphabetizing the words, using the words in sentences, writing letters using the words, and completing the workbook pages in the literacy series (see appendix A).

Test #1: Weeks 1-3. To determine the students' achievement after receiving the traditional spelling instruction treatment, students were given a quiz. Each Friday the students were quizzed on the weekly spelling words. The three scores were summed for a total score.

Cooperative Learning Spelling Instruction # 1: Weeks 4-6. During weeks four, five and six, the same students were introduced to the cooperative learning strategies. Heterogeneous groups were established. Due to an odd number of students, two groups of four students, and one group of five students were created. The groups were established by the researcher and were based on ability. In order to group students by ability the researcher assessed the students scores on previous spelling tests. Students' scores were divided into low, middle, and high ability, and at least one student from each

level was included in each group. To promote team building skills, prior to the first cooperative learning session, students were asked to establish a group name as well as group rules. The importance of group members working together to help each other learn the material was stressed by the researcher. A combination of the Student Team-Assisted Division, method of cooperative learning, as well as Class Wide Peer Tutoring was utilized.

Prior to being given the weekly list of words each Monday, students were given instructions for studying together as well as the method of receiving group points. Students were informed that they would receive individual grades as well as group points based on how much improvement each member of the group showed on the end of the week spelling test. For instance, if Jane Doe had an average of 75% on the past three weeks spelling tests, she would receive two points for her group if her score on this spelling test went up to an 80% (see appendix B).

After receiving the instructions, the students received the spelling words for the week. On Tuesday, Wednesday and Thursday, students studied the words with one or more members of their group (see appendix C).

Test #2: Weeks 4-6. To determine the students' achievement after receiving the cooperative learning spelling instruction treatment, students were given a quiz. Each Friday the students were quizzed on the weekly spelling words. The three scores were summed for a total score.

Traditional Spelling Instruction # 2: Weeks 7-9. This researcher felt that there was a need to control for the possibility of lower scores based on increasing levels of difficulty of the words utilized and the problems of history and maturation discussed previously. Therefore, during weeks seven, eight, and nine, the students were taught spelling using traditional spelling instruction.

The students were given the list of spelling words on Monday. On Tuesday, Wednesday and Thursday the students were given study assignments to complete

individually. These study assignments included; quizzing themselves, alphabetizing the words, using the words in sentences, writing letters using the words, and completing the workbook pages in the literacy series (see appendix D).

Test #3: Weeks 7-9. To determine the students' achievement after receiving the traditional spelling instruction treatment, students were given a quiz. Each Friday the students were quizzed on the weekly spelling words. The three scores were summed for a total score.

Description of Instrument

The instruments used to measure spelling achievement were weekly spelling tests. The spelling words came from the literature anthology text that was used in the fourth grade curriculum for this school. This text was the Houghton Mifflin, fourth grade, *Invitations to Literacy: Imagine* series. Spelling word lists were based primarily on specific spelling patterns and were supplemented by vocabulary words from the stories. Students were quizzed on either 15 or 20 words per week (see appendix E).

Chapter IV

Analysis of Results

Introduction

This research was designed to study the effect of cooperative learning instructional strategies on fourth grade achievement in spelling. Comparisons were made between the spelling achievement of fourth grade students, when they were taught by cooperative learning strategies and the spelling achievement of these same fourth grade students when they were taught by traditional spelling instructional methods.

Results

A series of t-tests for nonindependent samples were used to analyze the data. Specifically, t-tests were performed on three groups of data. Comparisons were made for the differences between the pretest and the total scores after the traditional treatment. Then comparison of the difference of the total scores after the first traditional treatment and the cooperative learning treatment were performed. Finally, the total scores after the cooperative learning treatment were compared with the total scores of the second traditional treatment. Table 1 lists the individual scores. The mean and standard deviation were also computed. The mean for the pretest was 91 with a standard deviation of 8.8831. The mean for the first treatment of traditional spelling was 86.4167 with a standard deviation of 15.0240. The mean for cooperative learning instruction was 93.8462 with a standard deviation of 6.9143. The mean for the second treatment of traditional spelling was 88.8333 with a standard deviation of 8.9527 (see table 1).

table 1

Raw Scores of Spelling Tests Shown as Percentages

Student #	Pretest	Traditional 1	Cooperative	Traditional 2
1	88	95	98	89
2	85	82	91	84
3	100	100	100	100
4	85	75	89	75
5	93	80	90	87
6	100	96	98	98
7	95	100	98	96
8	75	55	98	-
9	97	98	98	91
10	100	98	100	98
11	77	65	78	73
12	97	93	98	93
13	-	-	84	82
N	12	12	13	12
Mean	91.0000	86.4167	93.8462	88.3333
Std. Deviation	8.8831	15.0240	6.9143	8.9527

Note. (-) Data could not be obtained due to the student not completing all three tests used for the computation of the score.

Data for this study was analyzed using a two-tailed t-test formula with a p=.05 level of significance. The difference of means score when comparing the pretest with the first traditional spelling treatment was 4.5833. A t-value of 2.018 was obtained which did

not meet the p=.05 significance level. The difference of means score when comparing the

first traditional spelling treatment with the cooperative learning spelling treatment was –

8.2500. A t-value of –2.352 was obtained which was significant at the p=.05 level. The

difference of means score when comparing the cooperative learning spelling treatment

with the second traditional spelling instruction treatment was 4.6667. A t-value of 3.945

was obtained which was also significant at the p=.05 level (see table 2).

table 2
Paired Samples t-tests

Paired Samples	N	Mean	Standard Deviation	t	df	Significance level
Pretest – Traditional 1	12	4.5833	7.8678	2.018	11	.10
Traditional 1- Cooperative Learning	12	-8.2500	12.1515	-2.352	11	.05
Cooperative Learning- Traditional 2	12	4.6667	4.0973	3.945	11	.001

Given that the data indicates a significant difference between both the first

traditional treatment and cooperative learning and the second traditional treatment and

cooperative learning, there is sufficient evidence to reject the null hypothesis. There was

a significant difference in the spelling achievement of fourth grade students, when they

were taught by cooperative learning strategies as compared to the spelling achievement of

these same fourth grade students when they were taught by traditional spelling

instructional methods.

Chapter V

Conclusions and Recommendations

Introduction

This research was designed to study the effect of cooperative learning instructional strategies on fourth grade achievement in spelling. Comparisons were made between the spelling achievement of fourth grade students, when they were taught by cooperative learning strategies and the spelling achievement of these same fourth grade students when they were taught by traditional spelling instructional methods.

Conclusions

The results of this study indicated that there was a significant difference in the spelling achievement of fourth grade students when using cooperative learning strategies as compared to traditional spelling instruction. This study supports the results of previous studies that have also shown a favorable significant difference when using cooperative learning to teach spelling as well as other subjects.

Many schools are requiring that teachers use new methods of teaching to challenge students. Cooperative learning is one method that has been shown to be effective across grade levels and subject areas. This study adds to that body of research.

General Observations

Given that a relatively small sample was used for the research it would be difficult to make any broad reaching conclusions, however some general observations warrant discussion.

Twelve of the thirteen students in the class did as well or better on the achievement tests when using cooperative learning as opposed to traditional instruction. Although a statistical analysis was not done on the subgoups (low, medium, and high achievers) in the study, due to such small subgroups, this researcher made some general observations as to the differences in each.

The largest difference was seen with the lowest achieving students. One student had a pretest average of 75, a traditional treatment average of 55, and a cooperative learning average of 98. As well as the increase in grade that was seen in this student when utilizing cooperative learning, her self-esteem and confidence also seemed to improve. She began to look forward to the spelling test every week and would want her paper corrected immediately because she knew that she had done well. An improvement was also noted in her ability to determine which words she had not spelled correctly, which helped in her other writing.

The higher achieving students (those with a pretest average of 90 or above) continued to do well regardless of the strategy used. The middle achieving students (those with a pretest average of 80 to 89) also achieved higher scores when using cooperative learning strategies than the traditional spelling instruction.

As well as the achievement effects of the cooperative learning treatment, social effects were noted by the researcher. Students were excited to be allowed to work as a

group to complete their spelling assignments and began to look forward to spelling every day. The team rewards were an effective motivator to encourage students to work together.

There was some initial apprehension about working with certain members of the group and students did ask to change groups or expressed initial refusal to work with a certain member of their group. Students were encouraged to work with different partners within their group and were offered suggestions as to how to work out any group problems but were told that the group must solve any problems together. By the end of the cooperative learning treatment students were no longer asking the teacher to work out issues but were automatically solving them on their own. When the cooperative learning treatment ended students were disappointed and many asked to continue cooperative learning spelling instruction.

Friendships also began to grow when utilizing the cooperative learning strategies. Students who initially refused to work together often became friends after the treatment. Some students found that they were better at collaborating with this new person than those with whom they had previously chosen to collaborate.

Implications for Further Research

Cooperative learning is one method that has been shown to be effective across grade levels and subject areas. Further research might utilize a larger sample and the use of a control group as those were both barriers to generalizing the results of this research.

A study of longer duration would be helpful to determine whether the initial positive effects of the cooperative learning strategies diminish after the novelty of the

approach wears off for the students. A year-long study that utilizes a control group that receives traditional spelling instruction and a treatment group that receives cooperative learning instructions would be helpful in determining the long-term achievement and socialization effects.

Given that many spelling programs provide no in-class study time, a study of the effect of in-class study time versus no in-class study time would be useful to research. Prior to this study the students in this classroom were given very little in-class study time per week so the variable of in-class study time may have affected some of the students scores. Some students do not complete spelling homework assignments so it would make sense that their scores would improve simply due to practice.

A study of the spelling achievement effects of cooperative learning at different grade levels would also be appropriate.

Finally, because this researcher had not received formal cooperative learning training, a study that examines the effects of cooperative learning when taught by teachers who have received cooperative learning training versus cooperative learning taught by those teachers who have not received cooperative learning training would also be helpful.

Appendix A

Traditional Spelling Instruction #1
Lesson Plans

	Monday	Tuesday	Wednesday	Thursday	Friday
March 1, 1999 - March 5, 1999	Introduce the spelling words for the week. Give students a pretest. Then have students write the correct spelling of each word on their own list. (20 Minutes)	Students will locate any misspelled words from the pretest in the story. Students will write the sentence from the story. (20 Minutes)	Students will complete Literacy Activity Book page 176. (20 Minutes)	Students will write sentences using each spelling word once. (20 Minutes)	Students will take the spelling test. (20 Minutes)
March 8, 1999 - March 12, 1999	Introduce the spelling words for the week. Give students a pretest. Then have students write the correct spelling of each word on their own list. (20 Minutes)	Students will individually write the spelling words in alphabetical order. (20 Minutes)	Students will write sentences using each spelling word. (20 Minutes)	Students will quiz themselves using the, "Look, Say, Touch and Spell, Look Away and Write" method. (20 Minutes)	Students will take the spelling test. (20 Minutes)
March 15, 1999 - March 19, 1999	Introduce the spelling words for the week. Give students a pretest. Then have students write the correct spelling of each word on their own list. (20 Minutes)	Students will complete the Literacy Activity Book pages 188-189. (20 Minutes)	Students will write the spelling words in alphabetical order. (20 Minutes)	The students will write sentences using each word. (20 Minutes)	Students will take the spelling test. (20 Minutes)

27

Name ....

Spelling Spree

What's the Question? Write a Spelling Word to complete each question.

1 The answer is "in City Hall."

The question is "Where is the office of the ___mayor **(1 POINT)**___ ?"

2 The answer is "one hundred."

The question is "How many cents are in a ___dollar **(1)**___ ?"

3 The answer is "my thumb."

The question is "What's your shortest, fattest ___finger **(1)**___ ?"

4 The answer is "or."

The question is "What word is often paired with ___either **(1)**___ ?"

5 The answer is "basement."

The question is "What is another word for ___cellar **(1)**___ ?"

Proofreading Find and circle five misspelled Spelling Words in this announcement. Then write each word correctly.

6 ___gather **(1)**___

7 ___neighbor **(1)**___

8 ___honor **(1)**___

9 ___number **(1)**___

10 ___favor **(1)**___

Welcome, everyone, to the Marbles Championship! It's nice to see such a big crowd (gathar) for this event. Why, I see my next-door (naybor,) and wait, there's the mayor! What an (honer) Baseball diamond (nubmer) three is really the place to be today. Say, who's in (favvor) of having a parade later?

Congratulations, Lupe! On a separate sheet of paper, make a congratulation card for Lupe. Write your message in sentences or as a poem. Use Spelling Words from the list.

Name ....

Join the March!

Words That End with schwa + *l* Each
Spelling Word has more than one syllable and
ends with the schwa sound + *l* that you hear
in *equal.* This sound, written as lǝll, can be
spelled with the pattern *al, il, le,* or *el.*
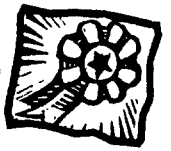
lǝll   equal   civil   trouble   travel

**Help to organize the march. Complete the
Spelling Word on each sign by writing
the correct lǝll spelling pattern. Then
write each word by the matching
spelling pattern.**

(1 POINT EACH)

nick__el

pup__il

loc__al

al

fin__al

civ__il

il

le

el

al

1 _____ equal **(1 POINT)**
2 _____ legal **(1)**
3 _____ final **(1)**
4 _____ local **(1)**

il
5 _____ civil **(1)**
6 _____ pupil **(1)**

le
7 _____ trouble **(1)**
8 _____ puzzle **(1)**

el
9 _____ travel **(1)**
10 _____ nickel **(1)**

equ__al

trav__el

puzz__le

troub__le

leg__al

ASSESSMENT TIP: TOTAL **20** POINTS

Name
....

Spelling Spree

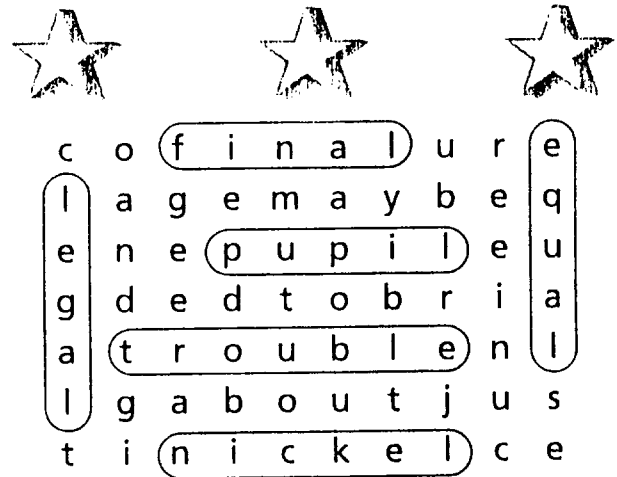**Proofreading** Circle the four misspelled Spelling Words. Write each word correctly.

For three years, this (civel) action has been in the (locale) courts. In January, I will (travil) to Washington to argue this legal issue before the Supreme Court. With the law on our side, the justices will not have to (puzle) long over the matter.

Spelling Words

1. equal
2. civil
3. legal
4. trouble
5. final
6. local
7. travel
8. puzzle
9. pupil
10. nickel
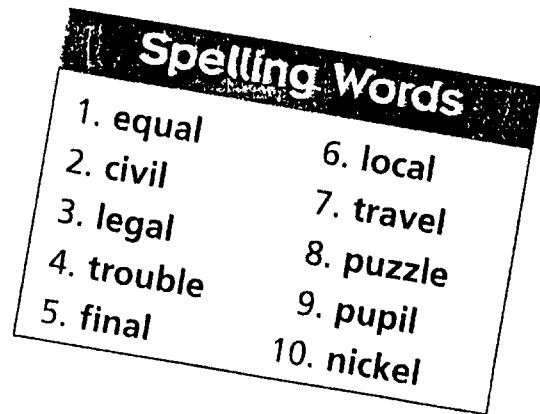
❶ civil **(1 POINT)** _____

❷ local **(1)** _____

❸ travel **(1)** _____

❹ puzzle **(1)** _____

Word Search Write the Spelling Word that fits each clue. Then circle the word in the puzzle.

5. student
6. having the same rights and privileges
7. a five-cent coin
8. authorized by law
9. last
10. a cause of difficulty or distress

```
c  o  f  i  n  a  l  u  r  e
l  a  g  e  m  a  y  b  e  q
e  n  e  p  u  p  i  l  e  u
g  d  e  d  t  o  b  r  i  a
a  t  r  o  u  b  l  e  n  l
l  g  a  b  o  u  t  j  u  s
t  i  n  i  c  k  e  l  c  e
```

❺ pupil **(1)** _____

❻ equal **(1)** _____

❼ nickel **(1)** _____

❽ legal **(1)** _____

❾ final **(1)** _____

❿ trouble **(1)** _____

Write the remaining puzzle letters in order on another sheet of paper to find the secret message.

Courage may be needed to bring about justice.

Rest in Peace An obituary, or death notice, may include a short biography. Marshall died at age 84 on January 24, 1993. Write a short obituary for him. Use Spelling Words.

ASSESSMENT TIP: TOTAL **10** POINTS

30

Meet the Challenge 189

Appendix B

IMPROVEMENT POINTS

Quiz Score	Points	Comment
5 or more below base	0	"You can do better!"
4 below to 4 above base	1	"About average for you --but you can do better!"
5-9 above base or 90% to 99%	2	"Better than your average -- Great work!"
10 or more above base or 100%	3	"Super! Much better than your average!"

TEAM REWARDS

Points	Rewards
Average of 1 point	* Sticker or piece of candy
Average of 2 points	* Choice of pencil or piece of candy for each member * Certificate of achievement
Average of 3 points	Each member receives * Sticker * Piece of candy * Pencil * Certificate of achievement * Name on Super Spellers Wall of Fame

**Any individual student who adds 3 points to their team score will have their name on the Super Spellers Wall of Fame.

Appendix C

Cooperative Learning Spelling Instruction #1
Lesson Plans

	Monday	Tuesday	Wednesday	Thursday	Friday
March 22, 1999 - March 26, 1999	Introduce the spelling words for the week. Give students a pretest. Then have students write the correct spelling of each word on their own list. (20 Minutes)	Students will study words with a partner from their group using the study instructions provided. (20 Minutes)	Students will study words with a different partner from their group using the study instructions provided. (20 Minutes)	Students will study words with a partner from their group using the study instructions provided. (20 Minutes)	Students will take the spelling test. (20 Minutes)
April 5, 1999 - April 9, 1999	Introduce the spelling words for the week. Give students a pretest. Then have students write the correct spelling of each word on their own list. (20 Minutes)	Students will study words with a partner from their group using the study instructions provided. (20 Minutes)	Students will complete the Literacy Activity Book pages 198-199 with a partner from their group. (20 Minutes)	Students will scramble each of their spelling words. Students will trade their scrambled list with a partner from their group. Students will unscramble their partners list. (20 Minutes)	Students will take the spelling test. (20 Minutes)
April 12, 1999 - April 16, 1999	Introduce the spelling words for the week. Give students a pretest. Then have students write the correct spelling of each word on their own list. (20 Minutes)	Students will study the words with a partner fro their group using the stud instructions provided. (20 Minutes)	Students will scramble each of their spelling words. Students will trade their scrambled list with a partner from their group. Students will unscramble their partners list. (20 Minutes)	With a partner, students will write a letter using all of the spelling words. (20 Minutes)	Students will take the spelling test. (20 Minutes)

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Cooperative Learning Instructions to Students

For the next few weeks you will be studying your spelling words a little bit differently than in the past. You have all been assigned a new group to study your spelling words with. These students will be your team members for the next three weeks. You will be learning to spell the words together. It is going to be important for you to help each other learn the words. For the next few weeks you will be receiving your individual grade on your spelling test at the end of the week, but your team will also receive a group score which will be determined by how much your whole group improves from one week to the next. The teams that show the most improvement will receive prizes.

In a few minutes I will explain how each group will receive points. Your groups are not in competition with each other. Every group has an equal opportunity to receive points. If one group receives points that will not effect another group's points so every group has the opportunity to win prizes.

The first thing that your team needs to do is choose a name. This will be your team name for the next three weeks. After you have chosen a name your team needs to decide on the rules that will help you work the best together. I will pass out a list of some suggested rules. Your group may pick the ones that you think will help you the most.

Partner Study Instructions

You will be given the new list of spelling words each Monday. On Tuesday, Wednesday, and Thursday, you will study the words with one other member in your group. If you have an odd number of members in your group three of you will study together. You will study the words with a different member of your group each day.

You will follow this procedure to study the spelling words.

Student A
1. Read the first word to student B.

Student B
2. Write the word on a piece of paper.

Student A
3. If the word is correct tell student B, "That is correct!" Then go on to the next word.

4. If the word is spelled incorrectly tell student B the correct spelling of the word. Student B immediately writes the correct spelling. Then go on to the next word.

---

5. Follow this procedure for the rest of the words. Then repeat the procedure using only the words that were spelled incorrectly the first time. Continue until the teacher instructs you to switch.

6. Now student A will become student B and student B will become student A. **Repeat the entire procedure.**

Name

Clouds Get in Your Eyes

Adding -*ed* or -*ing* Each Spelling Word has a base word and the ending -*ed* or -*ing*. Some Spelling Words have a base word that ends with **e**. Drop the **e** before adding -*ed* or -*ing*.

care + ed = cared   race + ing = racing

Other Spelling Words have a base word that ends with a consonant. If the consonant follows one vowel, double the consonant before adding -*ed* or -*ing*. If the consonant follows another consonant, do not change the spelling of the base word.

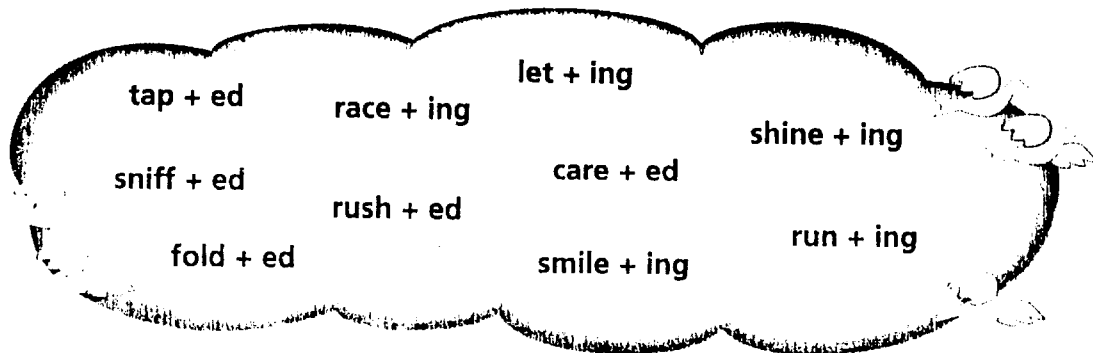run + ing = running   fold + ed = folded

Spelling Words

1. racing
2. cared
3. folded
4. running
5. rushed
6. letting
7. shining
8. smiling
9. tapped
10. sniffed

My Study List
What other words do you need to study for spelling? Add them to My Study List for Sadako in the back of this book.

Join the base words and the endings to make Spelling Words. Then write the Spelling Words under their correct headings.

tap + ed   race + ing   let + ing   shine + ing

sniff + ed   rush + ed   care + ed   run + ing

fold + ed   smile + ing

Spelling Change
Drop e

1 racing (1 POINT)
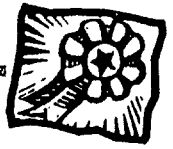
2 cared (1)

3 shining (1)

4 smiling (1)

Spelling Change
Double Final Consonant

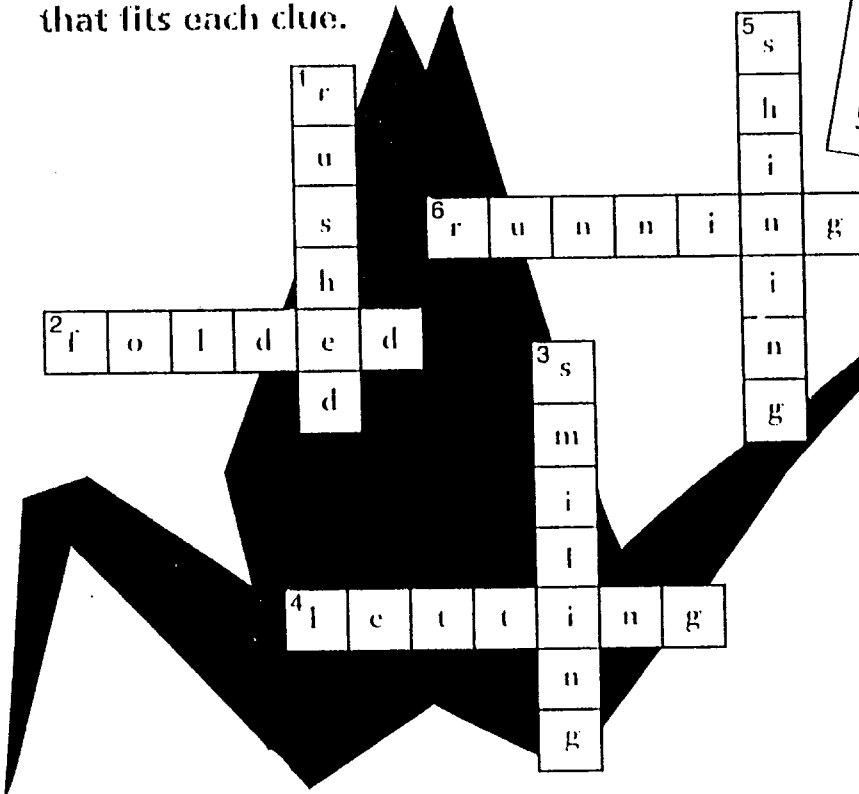5 running (1)

6 letting (1)

7 tapped (1)

No Spelling Change

8 folded (1)

9 rushed (1)

10 sniffed (1)

37   ASSESSMENT TIP: TOTAL **10** POINTS

Name

Spelling Spree

Original Origami Write the Spelling Word that fits each clue.

Crossword:

1. r u s h (2) f o l d e d
6. r u n n i n g
4. l e t t i n g
5. s h i n i n g
3. s m i l i n g

Clues

1. hurried **(1 POINT)**
2. doubled over **(1)**
3. having a happy expression **(1)**
4. allowing **(1)**
5. bright **(1)**
6. faster than walking **(1)**

Proofreading Find and circle four misspelled Spelling Words in these notes. Then write each word correctly.

Folded Crane Club Notes: Hiroko (tapt) on the table to call the meeting to order. We discussed letting new members join the club. Next Hiroko asked if we (carred) to do something special on the anniversary of Sadako's death. A few members wanted to have a (raceing) event. Others (snifed) at the idea.

7 tapped **(1)** _____

8 cared **(1)** _____

9 racing **(1)** _____
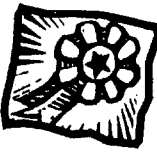
10 sniffed **(1)** _____

Poetic Images A **haiku** is a short Japanese poem, usually having 17 syllables. It gives an image of something in nature, and it creates a mood. On a separate sheet of paper, write a few haiku about the story's nature subjects. Use Spelling Words from the list.

ASSESSMENT TIP: TOTAL 10 POINTS

Meet the Challenge **199**

Appendix D

Traditional Spelling Instruction #2
Lesson Plans

	Monday	Tuesday	Wednesday	Thursday	Friday
April 19, 1999 - April 23, 1999	Introduce the spelling words for the week. Give students a pretest. Then have students write the correct spelling of each word on their own list. (20 Minutes)	Students will individually complete Literacy Activity Book page 208. (20 Minutes)	Students will individual complete Literacy Activity Book page 209 (20 Minutes)	Students will make a poster which includes all spelling words. (20 Minutes)	Students will take the spelling test.
April 26, 1999 - April 30, 1999	Introduce the spelling words for the week. Give students a pretest. Then have students write the correct spelling of each word on their own list. (20 Minutes)	Students will individually write a letter using all of the spelling words. (20 Minutes)	Students will quiz themselves using the "Look, Say, Touch and Spell, Look Away and Write" method. (20 Minutes)	Group Activity Cube A six sided cube will be passed around the room. Each side has a direction for the student to follow. As the ball is passed the teacher says a spelling word. The student will follow the direction on the cube. Each will either spell, define, or use the word in a sentence. (20 Minutes)	Students will take the spelling test.
April 12, 1999 - April 16, 1999	Introduce the spelling words for the week. Give students a pretest. Then have students write the correct spelling of each word on their own list. (20 Minutes)	Students will write each spelling word three times (20 Minutes)	Students will complete the Literacy Activity Book pages 247-248. (20 Minutes)	The students will use the Group Activity Cube (see above). (20 Minutes)	Students will take the spelling test.

Name

Waltzing with Max

Changing Final *y* to *i* Each Spelling Word has the ending *-ed*, *-es*, *-er*, or *-est* added to a base word that ends with a consonant and *y*. When the ending is added, change the *y* to *i*.

carry + ed = carried
story + es = stories
sorry + er = sorrier
funny + est = funniest

**TIP:** Does a vowel or a consonant come before the final *y*?

Spelling Words

1. easiest
2. carried
3. stories
4. sorrier
5. cities
6. funniest
7. families
8. angrier
9. copied
10. studied

My Study List
What other words do you need to study for spelling? Add them to My Study List for *No One Is Going to Nashville* in the back of this book.

Help Sonia teach Max to do the box step. Join the words and endings to write Spelling Words.

1
easy

2
funny

-est

10
sorry
9
angry

-er

-ed

3
carry
4
copy
5
study

-es

8
story
7
city
6
family
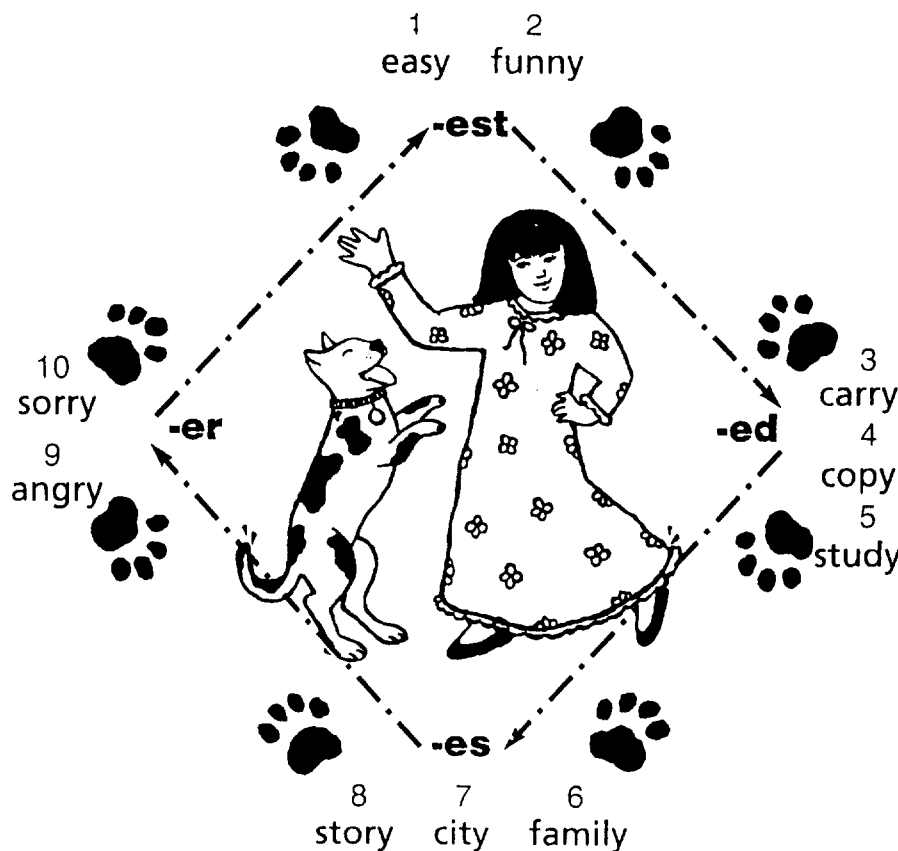
1 easiest **(1 POINT)**

2 funniest **(1)**

3 carried **(1)**

4 copied **(1)**

5 studied **(1)**

6 families **(1)**

7 cities **(1)**

8 stories **(1)**

9 angrier **(1)**

10 sorrier **(1)**
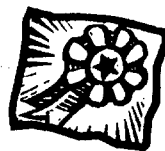
Name

Spelling Spree

Proofreading Circle five misspelled
Spelling Words. Write each word correctly.

Each year, stray pets are found
all over our (citties.) Sometimes, whole
(famalies) of puppies and kittens are
abandoned. If these animals could
talk, many would have shocking
(storys) to tell. Is neglecting an animal
really the (eaziest) way to get rid of
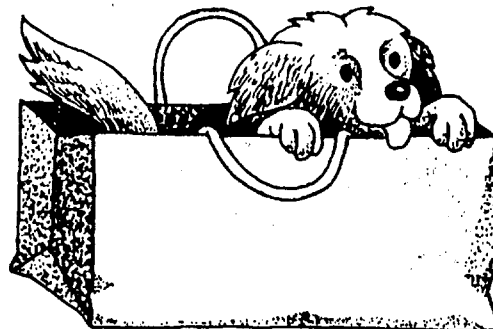it? This makes me (angryer) than I
have ever been.

Spelling Words

1. easiest
2. carried
3. stories
4. sorrier
5. cities
6. funniest
7. families
8. angrier
9. copied
10. studied

1 cities (1 POINT) _____

2 families (1) _____

3 stories (1) _____

4 easiest (1) _____

5 angrier (1) _____

Rhyme Time Write the Spelling Word
that best completes each rhyme.

6 There's no ___ sorrier (1) ___ sound
than a dog's wail in the pound.

7 I've ___ studied (1) ___ white mice,
and I've decided they're nice.

8 The ___ funniest (1) ___ song
was about a cat named Kong.

9 I ___ copied (1) ___ you.
When you smiled, I did too.

10 We ___ carried (1) ___ Wag
home in a small bag.

Dogs and You An opinion tells how you feel about something.
Richard has a strong opinion about dogs. On a separate sheet of
paper, write your opinion of dogs. Use Spelling Words from the list.

ASSESSMENT TIP: TOTAL **10** POINTS

42

Meet the Challenge **209**

Name

Syllable Vegetables

The VCCV Pattern Each Spelling Word has two syllables and the vowel-consonant-consonant-vowel (VCCV) pattern. To find the syllables of many words with the VCCV pattern, divide between the consonants.

VC|CV	VC|CV
hap|pen	tur|nip

Help the Arcturians find their food supply. Draw lines to match the syllables of the Spelling Words. Then write each word correctly on the giant green bean. Draw a line between the syllables.
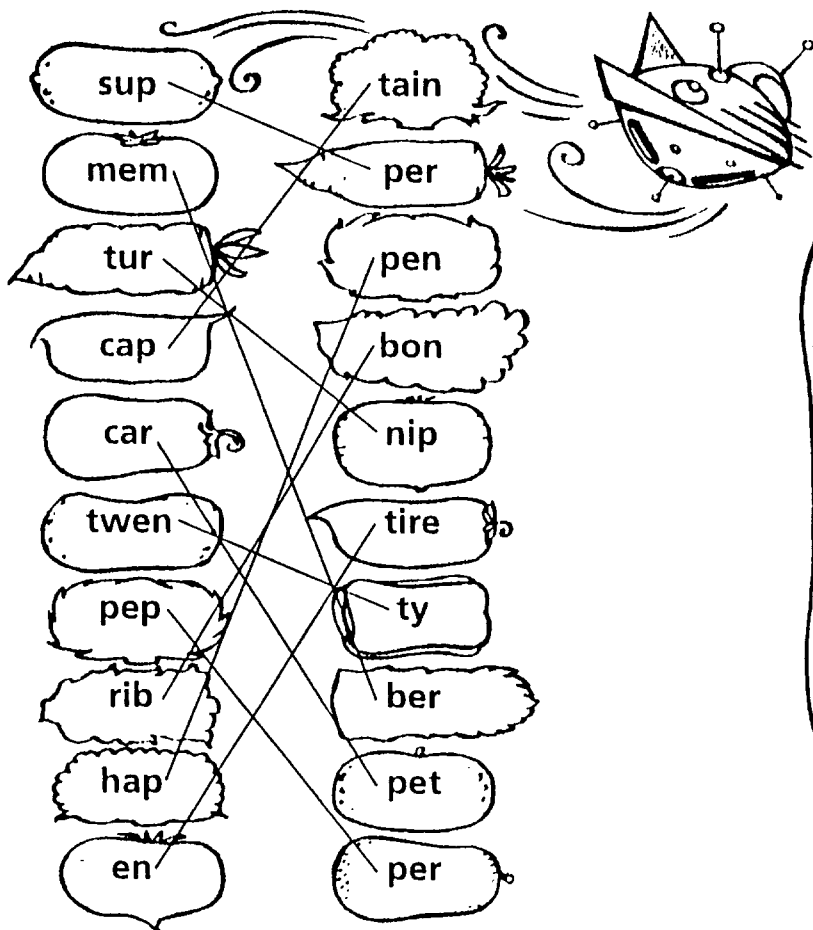
Spelling Words

1. happen
2. pepper
3. turnip
4. twenty
5. supper
6. carpet
7. entire
8. ribbon
9. member
10. captain

My Study List
What other words do you need to study for spelling? Add them to My Study List for June 29, 1999 in the back of this book.

sup — tain
mem — per
tur — pen
cap — bon
car — nip
twen — tire
pep — ty
rib — ber
hap — pet
en — per

1. hap|pen
2. pep|per
3. tur|nip
4. twen|ty
5. sup|per
6. car|pet
7. en|tire
8. rib|bon
9. mem|ber
10. cap|tain

ASSESSMENT TIP: TOTAL **20** POINTS (**1** POINT FOR EACH MATCHED PAIR OF SYLLABLES AND **1** POINT FOR EACH WRITTEN WORD)

Could It Really Happen?   247

43

Name

Spelling Spree

Proofreading Find and circle five misspelled Spelling Words in this TV news script. Then write each word correctly.

> Here's some late-breaking news from a (membre) of our staff. Just (twennty) minutes ago, thousands of huge vegetables fell from the sky. One-ton peas (carpit) the entire city of Springfield. A giant (ternip) landed atop Seattle's Space Needle. A blimp-sized green (peper) sits on the White House lawn. No one will go hungry tonight!

Spelling Words

1. happen
2. pepper
3. turnip
4. twenty
5. supper
6. carpet
7. entire
8. ribbon
9. member
10. captain

1 member **(1 POINT)**

2 twenty **(1)**

3 carpet **(1)**

4 turnip **(1)**

5 pepper **(1)**

Tongue Twisters Write the Spelling Word that completes each tongue twister.

6 The river is a _____ribbon **(1)**_____ of rhubarb, radishes, and rutabaga.

7 An enormous eggplant engulfed the _____entire **(1)**_____ expressway.

8 Should Sue steam some super-sized spinach and squash for _____supper **(1)**_____ ?

9 Can the cruiser's _____captain **(1)**_____ capture all the cabbages and carrots?

10 Does Hal _____happen **(1)**_____ to be hungry for a huge helping of horseradish?

✎ **Star Cruiser S.O.S.** You are the radio operator aboard the *Alula Borealis*. On a separate sheet of paper, write a message requesting that food be rushed to the spacecraft. Use Spelling Words from the list.

ASSESSMENT TIP: TOTAL **10** POINTS
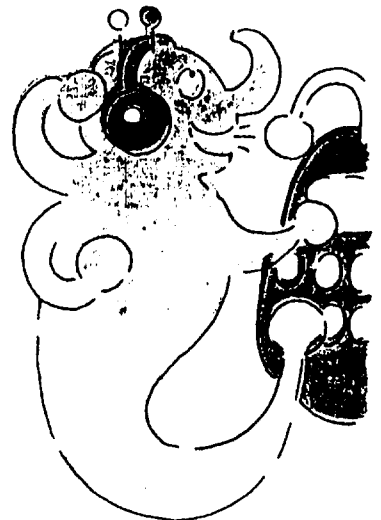
Appendix E

Spelling List

Week 1	Week 2	Week 3	Week 4	Week 5	Week6	Week 7	Week 8	Week 9
finger	doctor	equal	middle	racing	smelling	easiest	sunnier	happen
gather	chapter	civil	metal	cared	dancing	carried	heaviest	pepper
honor	sugar	legal	towel	folded	pleasing	stories	noisier	turnip
number	litter	trouble	bottle	running	dimmed	sorrier	happiest	twenty
favor	ladder	final	medal	rushed	striped	cities	scarier	supper
either	meter	local	pedal	letting	stripped	funniest	hobbies	carpet
neighbor	motor	travel	handle	shining	checking	families	ferries	entire
mayor	pillar	puzzle	angel	smiling	dared	angrier	windier	ribbon
dollar	temper	pupil	candle	tapped	buzzed	copied	married	member
cellar	harbor	nickel	total	sniffed	phoning	studied	ladies	captain
shoulder	popular	social	mineral	tired	whirred	memories	qualities	intend
quiver	solar	example	decimal	wheeled	scarred	beauties	loveliest	expect
soccer	anchor	several	quarrel	scrubbed	scared	countries	victories	channel
eraser	quarter	general	bicycle	stroking	dozed	blotchier	iciest	advance
razor	burglar	potential	crystal	launched	bluffing	abandoned	terrified	galley
awardee		Constitution	justice		memorial	responsibilities		concludes
accurate		Amendment	segregated		atom bomb	relieved		conditions
strengthen		integrated	illegal		leukemia	companion		development
exhaustion		opportunity	lawyer		comfort	disposition		experiment
opponent		prejudice	society		monument	decision		effect

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