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ABSTRACT

An action research project described a program for teaching spelling strategies to increase the application of spelling skills in students' writing. The first half of the targeted population consisted of gifted first grade students from numerous, stable, upper-middle-class communities in a large Midwestern city and the surrounding suburbs. The second half of the targeted population consisted of heterogeneous third grade students from a growing, middle-class community located in a southern suburb of the same city. The problems of inadequate application of spelling skills to student writing were documented through data which included teacher assessment of student writing, student spelling surveys, and parent surveys. Analysis of probable cause data revealed that parental attitudes, involvement and experience with spelling, and students' prior spelling and writing experience all influence students' spelling performance. In addition, the reliance in one mode of instruction for spelling in isolation caused poor performance of spelling in daily writing. A review of solution strategies suggested by knowledgeable others, combined with an analysis of the problem settings, resulted in the selection of an intervention consisting of direct teaching of spelling strategies. Post intervention data indicated that students in both sites increased the number of correctly spelled words within their writing by a substantial percentage. Teachers/researchers at both sites plan to continue implementation of the strategies in future classes with minor changes in integration and time allocated for lessons. (Contains 37 references and four figures of data. Appendixes contain letters to parents, survey instruments, pre- and post-intervention instruments, five spelling strategy activities, and survey results.) (RS)

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**A CONSTRUCTIVIST APPROACH  
TO SPELLING STRATEGIES**

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**An Action Research Project Submitted to the Graduate Faculty of the School  
of Education in Partial Fulfillment of the Requirements for the Degree of  
Master of Arts in Teaching and Leadership**

**Saint Xavier University & IRI/Skylight**

**Field-Based Masters Program**

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## ABSTRACT

This report describes a program for teaching spelling strategies in order to increase the application of spelling skills in students' writing. The first half of the targeted population consisted of gifted first grade students from numerous, stable, upper-middle class communities in a large Midwestern city and the surrounding suburbs. The second half of the targeted population consisted of heterogeneous third grade students from a growing middle-class community located in a southern suburb of the same Midwestern city. The problems of inadequate application of spelling skills to student writing were documented through data which included teacher assessment of student writing, student spelling surveys, and parent surveys.

Analysis of probable cause data revealed that several factors affected spelling skills in writing. Parental attitudes, involvement and experience with spelling, as well as the students' prior spelling and writing experience all had an influence on a student's spelling performance. In addition, the reliance on one mode of instruction for spelling in isolation has caused poor performance of spelling in daily writing.

A review of solution strategies suggested by knowledgeable others, combined with an analysis of the problem settings, resulted in the selection of an intervention consisting of direct teaching of spelling strategies. These strategies, combined with the expectation that students' attitude toward spelling will improve, form the core of this study.

Post intervention data indicated that students at Site A and Site B increased the number of correctly spelled words within their writing by a substantial percentage. Teachers/researchers at both sites plan to continue implementation of the strategies in future classes with minor changes in integration and time allocated for lessons.

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## CHAPTER 1

### PROBLEM STATEMENT AND CONTEXT

#### General Statement of the Problem

The students of the targeted first and third grade classes have demonstrated an inability to utilize strategies for correct spelling in their daily work. Evidence for the existence of the problem includes periodic teaching assessment of student writing, past report card grades, student spelling strategy surveys, and parent feedback.

#### Immediate Problem Context

Site A is an independent, not-for-profit, nondenominational day school located in a western suburb of a large Midwestern city. It has an enrollment of 362 bright and academically gifted children in Early Childhood (three-year olds) through eighth grade. Of these 362 students, 180 are boys and 182 are girls. As a magnet school, students are drawn from the city and 32 surrounding suburbs, with the following breakdown of ethnic characteristics: 91.8% White, 0.6% Black, 0.8% Hispanic, 6.6% Asian-Pacific Islander, and 0.2% Native American. The attendance rate is 98.5%, with no chronic truants. There is virtually no student mobility during the school year; the attrition rate from one school year to the next has been 3% for the past five years. Site A has a class size of 16, with a teacher/pupil ratio of 11 to 1. The following minutes

per day are allocated for instruction: 150 for language arts (reading, writing, English grammar, French), 60 for math, 45 for science, and 45 for social science (Headmaster's Assistant, personal communication, 1997).

Site A is located on 11 acres, adjacent to a forest preserve. The original building was constructed in 1929 and has had two major additions since then. Although the latest addition, completed in 1996, provided the site with such innovations as a Performing Arts Center; a modern gymnasium; a modern, online library; an audio-visual room equipped with a large-screen VCR projector, slide projector, and various movie and filmstrip projectors; and a computer lab housing 35 computers networked with mini labs in all the classrooms, all the additions have maintained the original architectural style of the initial building. The structure itself is now a four-sided building surrounding an open courtyard and a reflection pond. Many of the classrooms still have working fireplaces as well. In addition to the general classrooms and those created by the addition, there are a specialized music room with three adjoining practice rooms and an art lab complete with a dark room, an art gallery, and a firing kiln. Teachers and students have access to both the Internet and the World Wide Web through any of the 133 computers in the school. In addition, scanners, large-screen monitors, video cameras, and a quick-take camera are available for teacher use. The site also allows for use of its natural surroundings as an outdoor classroom for such activities as tapping maple trees, studying pond life, and habitat evaluation. The site itself provides the framework for an enriched and innovative curriculum within a traditional setting.

Site A has a total of 34 faculty members. The average teaching experience is 20.3 years, with 57.6% with a Master's Degree or above. Of these 34 teachers, 81.8% are female, while 18.2% are male. The teachers' racial ethnic background is: 97% White, 3.0% Black, and no Hispanic,



Asian-Pacific Islander, or Native Americans. The average teachers' salary is \$35,500 (Headmaster's Assistant, personal communication, 1997).

Site A's spelling program is an integral part of language arts. Formalized spelling begins in first grade, with the spelling words taught in isolation from reading, writing, speaking, and listening. Students are given a pretest at the beginning of the week and then assigned a list of words to learn based on the pretest. All the words utilize a phonetic rule of spelling, but the children who score 80% or better on the pretest get a list with more difficult words. Challenge words based on a current unit of study are added to both lists. The students familiarize themselves with the words through such activities as alphabetizing, playing computer games with the words (Spellbound), writing sentences, and studying at home. The test is given on Friday. The words taught in this manner are only introduced once and not retaught at any point in the year. In Writers' Workshop, an approach to writing that emphasizes the process of writing using such strategies as mini-skill lessons, sloppy copy, teacher and peer editing for content, revision, final editing for mechanics, and sharing with an audience, students often use the words that have been introduced on a spelling list. During Writers Workshop, the teacher edits the students' misspelled words, and the students then correct them. Although spelling is taught in isolation, it is visible in all the writing the students do, particularly during Writers Workshop.

Site B is located in a southern suburb of the same large Midwestern city. The district has a total enrollment of 5,373. There are a total of 10 schools in the district, 7 elementary and 3 middle schools. From the total number of Site B students, the following is a breakdown of ethnic characteristics: 96.6% White, 1.7% Black, 1.0% Hispanic, 0.7% Asian-Pacific Islander, and no Native Americans. Site B has an attendance rate of 96.4%, with no chronic truants. There is a

rate of 3.2% of student mobility (attrition). Site B has an average class size of 25.4, with a 22:1 student to teacher ratio. The following minutes per day are allocated for instruction: 120 for English (reading and writing), 60 for math, 45 for science, and 45 for social science (School Report Card Site B, 1997).

Site B's district has a total of 295 teachers. The average teaching experience is 13.5 years with 60.1% with a Master's Degree or above. From the total number of district teachers, 88.5% are female, while 11.5% are male. The teachers' racial-ethnic background is : 96.6% White, 1.7% Black, 1.0% Hispanic, 0.7% Asian-Pacific Islander, and 0.0% Native American. The average teacher's salary in Site B's district is \$40,631 (School Report Card Site B, 1997).

Site B was built in 1991 in a developing upper-middle class subdivision in a suburb of a large Midwestern city. It houses an up-to-date computer lab with 30 computers and three wings of eight carpeted classrooms, each with a computer linked to the main office via e-mail. Each classroom has an overhead projector, magnetic chalkboards, and newer furniture and storage compartments. There is also a sink in each room. The media center houses four PowerMac computers with CD-ROMS and is linked to the Internet and World Wide Web. A large projection screen is also connected to these computers. All audiovisual materials are current, and the machinery to use them is less than three years old. There are a scanner, quick-take computer camera, poster-maker, video cameras, laptop computers, and color printers for teacher use. In each wing there is a storage closet which houses a VCR and monitor, slide projector, numerous manipulatives, class sets of various novels for curriculum use, resource books, and curriculum materials.

Site B's spelling program is very similar to that of Site A. Site B's spelling program is

also an integral part of language arts, and spelling words are taught in isolation from reading, writing, speaking, and listening. Students are given a list of words at the beginning of the week that are related to their current topics of study. Commonly misspelled words are also added to this list. The students are expected to complete such assignments as alphabetizing, studying, and writing sentences before the Friday test. In Writers' Workshop, students' misspelled words are edited by the teacher and then corrected by the student, just as done at Site A. The words taught are only introduced once and are not retaught throughout the year.

### The Surrounding Community

Site A's student population of 362 is represented by 248 families, coming from a large Midwestern city and 32 surrounding suburbs. It is, therefore, influenced by many of these communities, not just the one immediately surrounding it. There are, however, four communities which comprise the majority of the constituents of Site A. The community in which Site A is located accounts for 17 per cent of the Site's population; combined with three other western suburban communities, these four communities comprise the majority (55 per cent) of Site A's families. Of these families, 51% are dual parent and dual income families, 45% are dual parent and single income families, 3% are single parent and single income families, and 0.4 % are dual parent and retired families (Headmaster's Assistant, personal communication, 1997). Of the four suburban communities accounting for the majority of students at Site A, the populations range from 9,000 (based on a 1990 census) in the smallest community to 110,107 (based on a 1996 census) in the largest community, with the middle ones being 16,040 (based on a 1990 census) and 47,883 (based on a 1992 census) respectively. The median household incomes range from \$48,226 to \$187,501 in these four communities (Community Fact Sheet, 1997; Community Fact

Sheet, 1996). In addition, the communities range from extremely stable , with only 10 new housing permits issued in 1995 in one of the communities, to 1,775 in 1990 in one which is rapidly expanding (Community Fact Sheet, 1996; City of ---- 1992 U.S. Census). The median values of the homes in these communities also vary widely, from \$176,00 to \$477,000 (as of 1995); the average median home value for these four communities is \$280,000 (Community Fact Sheet, 1997; City of ---- 1990 U. S. Census; City of ---- 1996 Special U. S. Census; Community Fact Sheet, 1996). The other 29 communities from which Site A draws its population are quite varied. Each one accounts for a very small percentage of the Site's population and thus provides a much less significant influence than the four above-mentioned communities.

The community around Site B is undergoing rapid change and growth. The most recent income data is from 1990 and the census information is from 1995. As of 1995, the population was 44,628, with an average yearly population increase of 1,438. In 1995, the number of households was 16,267. The median household income in 1990 was \$51,748, with a per capita income of \$20,521. There were approximately 2.84 persons per household in 1995, with a median age of 37.8 years. In 1990, the median housing value was \$152,000 (City of ----1995 U.S. Census).

### National Context

Over the past several decades, the educational philosophies and practices regarding language arts have undergone various changes. In the 1950s and into the 1960s, language arts and, indeed, education as a whole, was based on teaching basic skills. Teaching was directed by "scope and sequence charts, phonics drills and worksheets [and] linguistic readers with contrived stories [with] far more time spent on practice exercises than . . . actual reading and writing"

(Routman, 1996, p.8). In an attempt to make education more meaningful, the whole language movement developed in the 1970s, with its philosophy of teaching reading and writing through the context of genuine literature and real-life writing experiences. According to Zutell (1996), “children [should] read from meaningful, enjoyable texts,” not contrived readers with a limit on the vocabulary (p.98). In addition, since spelling, like talking, was developmental, the best way to improve spelling was simply to practice it by reading and writing more without the inhibitions of spelling each word correctly (Routman, 1996). This desire to replace drill and practice with meaningful experiences formed the impetus of the whole language movement.

Objections to whole language came from many sectors, including the media, many parents of children receiving whole language instruction, and even the U.S. Department of Education’s document released in the 1980’s, *A Nation at Risk*. As Zemelman, Daniels, and Hyde (1993) indicate, there has been “widespread anger and worry about low test scores and the perceived slippage of the American workers’ global competitiveness” (p.1). Feeling that necessary skills, particularly in phonics and spelling, were being ignored in whole language, many people began demanding that the schools return to the basic approach (Routman, 1996). Thus, a conflict between the proponents of teaching basic skills such as phonics and spelling and those of teaching reading and writing in meaningful contexts seemed inevitable. Current research, however, indicates that both methods or philosophies can and should coexist. In fact, Routman (1996) contends that “the philosophy of whole language was never to abandon the teaching of phonics or spelling” (p.8). It is a misconception that schools no longer value or teach correct spelling. Although other aspects of writing now receive more emphasis than before, spelling still has a vital role to play (Zemelman, Daniels, & Hyde, 1993). Or, as Phenix and Scott-Dunne

(1991) state, "We need to strike a balance in our teaching so that students understand the place of spelling, and have enough confidence as spellers that they are not inhibited as writers (p. 17)."

Direct instruction of such basics as spelling is still necessary and can be done within the context of meaningful experiences as well. It is this balance between the two approaches to teaching language arts that is the basis for educational practices today and in the future.

## CHAPTER 2

### PROBLEM DOCUMENTATION

#### Problem Evidence

The need for teaching spelling strategies for use in every day writing has been demonstrated by the observed spelling when the students engage in writing. In recent years, as well as during the current school year, teachers at both sites have personally observed the inability of students to spell words correctly in their writing or to have any strategies when faced with an unfamiliar word. In addition, discussions with other teachers at both sites have indicated that other teachers have similar concerns regarding their students' spelling in writing. Although bright and academically gifted, the targeted first graders have been observed to demonstrate poor application of spelling strategies in their writing. The heterogenous targeted third graders have demonstrated a similar lack of spelling strategies. A desire to remedy this problem has led to this project.

Student writing samples also provide evidence for this problem. Student writing samples were obtained, therefore, using the writing prompt, "This year, I would like to learn about \_\_\_\_\_ (Appendix A)." The samples were then analyzed for the percentage of correctly spelled words in relation to the total number of words attempted. Figures 1 and 2 show the results of these analyses.

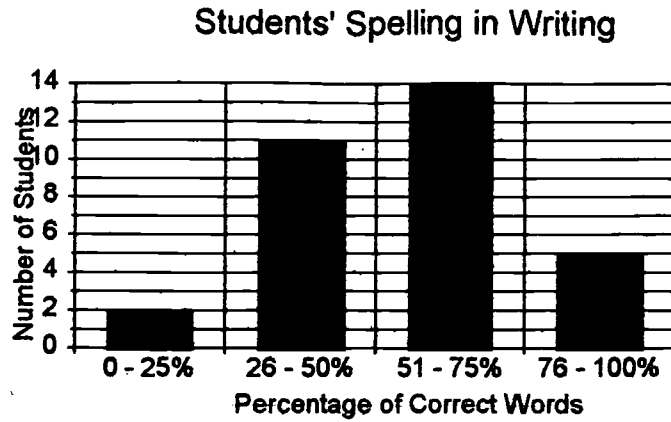


Figure 1. Percentage of words spelled correctly in relation to the number of words written by students at Site A on September 12, 1997.

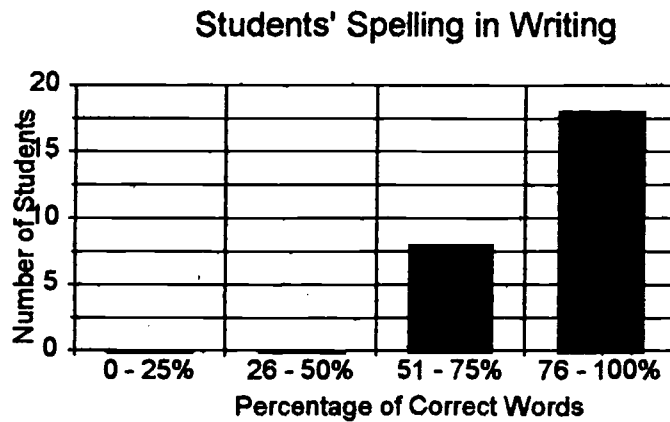


Figure 2. Percentage of words spelled correctly in relation to the number of words written by students at Site B on August 27, 1997.



As can be seen from the previous figures, the targeted first graders at Site A scored lower than the targeted third graders. The scores of the first graders tended to fall in the middle two quartiles with only a few students spelling either extremely well or extremely poorly, while the scores of the third graders were in the upper two quartiles.

### Probable Causes

There are many types of evidence that document the causes for lack of spelling proficiency within student writing at Site A and Site B schools. Parent spelling attitudes, student writing experience, lack of strategies for spelling, and little concern for correct spelling are factors that may cause students to spell poorly in their writing.

In order to document the spelling attitudes of parents and students, parent and student spelling surveys were used (Appendixes B, C, and D). During the first week of school, students in the targeted classrooms were administered a personal survey by the teacher. It posed questions based upon the following areas: personal spelling strategies used, personal opinion regarding the importance of spelling, and a self-evaluation of spelling capability. The results of the survey show that 75 per cent of the first grade students at Site A indicated that they relied on the spelling strategy of sounding out words, while most (56%) considered themselves either fairly good or extremely capable spellers. An even greater majority (69%) felt that spelling was either very easy or that they get by with their current spelling skills. The students were evenly split between the attitude that spelling is important and somewhat important.

When compared to the results from the first graders at Site A, most answers given by the third grade students at Site B were strikingly similar. There were definite spelling strategies that

the third grade students at Site B tended to use. Like most of Site A students, there was a large percentage (81%) of the Site B students who would sound out words that they did not know how to spell. Fourteen students (52%) also felt that letters only sometimes stand for a sound in a word. Similar to the students at Site A, a majority of students (85%) felt that spelling was important. No students at Site B felt that spelling was very hard, as compared with only two students at Site A. Most of these students (74%) also considered themselves capable spellers. The only major difference in the student survey results was in the strategies that students at Site B employed when spelling a difficult word; nine (33%) would think of a trick/rule to help them spell the word as compared to only three students (1%) at Site A.

A parental attitude and experience survey was sent home during the first week of school for parents to complete. It asked questions on the following topics: parental opinion of their child's spelling, a self-evaluation of their own spelling capabilities, strategies that the parents use when checking word spellings, parental observation of their child using strategies to spell words, a description of how the parents learned spelling as a child, their opinion on the most effective way to teach spelling, and their opinion regarding the importance of spelling.

In contrast to the results of the student surveys, almost all (94%) of the parents surveyed on the importance of spelling felt that it was either important or very important. Parents at both sites (93%) also had strong opinions regarding how spelling should be taught. These parents felt that spelling should be taught through the use of drill and practice and/or phonics. Most parents at the sites indicated that they had come from a school background that stressed the use of these techniques. A majority (82%) also indicated that they saw themselves as either good or excellent spellers after their years of phonics and spelling workbooks. The misconception seems to be then,

that since the parents turned out to be successful spellers using these techniques, the same ones should be used to teach their children. One fallacy in this reasoning lies in the fact that as adults they have learned to compensate for untaught strategies by developing their own. The high responses indicating that parents either look up words they are unsure how to spell in a dictionary (69%) or use the visual strategy of writing the word until it looks right (30%) emphasize this fact. These strategies of visualization and using authorities (dictionary) are being used in spite of how they learned spelling as children. Although 62 per cent of the parents indicated that the strategy their children rely on to spell words is to ask an adult, the children need to be taught to use other strategies similar to the ones the parents are using as adults.

#### Probable Causes in Literature

The importance of home experiences and parental attitudes in the development of a child's literacy and ability to work with the printed word is also indicated in the literature. One longitudinal study (Baker et al., 1996)) has found that the frequency of print-related activities that focused on literacy as a source of enjoyment positively affected the children's success with both reading and writing (including spelling). It also found that lower-income families not only provided fewer print-related activities, they also designed them as skill-training activities, rather than for enjoyment. Such attitudes and experiences were found to be less effective in promoting literary success in school. The sheer number of experiences and the way in which they are provided help determine the predisposition of a child to successful literary experiences in school.

The other important factor in the development of a child's spelling ability is the way spelling is taught. When students are taught through spelling lists, children tend to focus on words as separate entities rather than learning spelling strategies that can apply to many words.

Thus, they memorize the words for the test but do not truly learn them (Haggerty, 1994). In other words, skill-based instruction is not as effective as integrated instruction that provides a balance between real-life spelling strategies and meaningful uses for the written word (Wharton-McDonald, Etnenberger, Mistretta, & Rankin, 1997).

Finally, in order for teachers to truly use these teaching techniques effectively, they also need professional training and development. Unfortunately, much of the time teachers are not provided with the adequate training and support that would make their teaching truly effective (Routman, 1997). The above-mentioned causes or combination of them seem to indicate the reasons why students do not spell as well as they could and should.

## CHAPTER 3

### THE SOLUTION STRATEGY

#### Literature Review

Researchers and educators agree that spelling is a basic communication skill and is important. Research has also demonstrated that spelling is developmental. Whether the stages are many, such as Henderson's categories of Preliterate, Letter-Name, Within-Word Pattern, Syllable Juncture, and Derivational Constancy that Zutell (1996) refers to in his discussion of spelling, or the simple three-stage system of Prephonemic, Transitional, and Conventional developed by Powell and Hornsby (1993), there is general agreement that spelling develops gradually, as is true of most language skills. The disagreement lies in the approach used to teach spelling. Modern educators agree that spelling on a spelling test is not a true assessment of spelling facility; students do well on the Friday tests but do not transfer the learned spellings to their writing (Sitton, 1997).

There is a vast difference between the traditional views of spelling espoused in the 1950s and the views of today. For example, in the past spelling was viewed as a task in rote memorization of word lists that had no relevance to students' needs, while currently spelling is viewed as a problem-solving task involving the relationships between words with lists made based on students' writing needs. Similarly, weekly tests of commercial lists of words and dictation were the main form of assessment used in the past to determine one's spelling success, while today other forms of assessment such as the ability to use strategies to determine the correct

spelling of a word are used to determine the speller's strengths, either with or without the use of a check-up test that is given for the benefit of the learner (Bolton & Snowball, 1993). In addition, good spellers are now not defined simply as those who spell all the words correctly but as those who have a good understanding of the written language and how it works. They use their background knowledge and experience with words to help them find the pattern of spelling most likely to fit a given word (Baker, et al., 1996). Children who are described as having difficulty with spelling are those who rely solely on phonetic strategies, or "sounding it out" (Hughes & Searle, 1992). Good spellers, on the other hand, are those who have moved beyond phonetic spelling, have a good visual sense of words, have a good knowledge about words, know how to use resources such as the dictionary, spot spelling errors when proofreading, and spell many words automatically (Wilde, 1992; Angeletti & Peterson, 1993).

Although educators and researchers agree that spelling should be taught directly in a meaningful context based on appropriately developmental stages, there are differing views as to the best methods or system to use to accomplish this goal. Or, as Phenix and Scott-Dunne (1991) state, "Certainly our students should not be spending time on repetitive rote-memory tasks in preparation for a weekly test, but there are many spelling concepts which can be learned, and which can form the basis of creative instruction" (p.9). Such instruction should be designed to give students strategies to break down words into smaller, more solvable parts (Wharton-McDonald et al., 1997). Several educators and researchers have designed various instructional systems to help children develop these spelling strategies.

Zutell (1996) has developed the Directed Spelling Thinking Activity (DSTA). This approach is based on four basic principles: English is a complex system involving visual patterns,

sound relationships, and word parts; students learn to spell by acquiring continually more complex ideas about how words work; the development follows a broadly defined set of stages; patterns are first recognized in familiar words and then expanded to less familiar words. Using these four principles as a foundation, DSTA is designed to generate interaction, discussion, and concept formation. The students are actively involved in predicting spelling patterns, gathering evidence for the patterns, and revising their predictions; they are discovering the patterns instead of being told. Research used to help devise this system included a study in 1989 of third and fourth graders. In this study, Zutell and Rasinski (1989) found a strong correlation between oral reading abilities and spelling behaviors and was used in the to help develop the DSTA system, which works as follows. First, the teacher selects a pattern or contrast which the children are experiencing difficulty with, prepares a list of words that fit the pattern and that don't, and the children try to spell the words. Then, the students engage in a discussion of why they spelled a word in a particular way. Next, probably the next day, the students and teacher choose words to serve as keys for the contrast categories. Contrasts or sorting can be done based on orthographic principle or by meaning. The children then sort the words as a group. The next progression is to sort words that were not part of the original list, with students even adding their own words to the categories. Finally, the group tries to state a principle or rule which the activities have helped them formulate. After the initial word sorting activities, students are encouraged to do individual sorts or to hunt for more words to add to the categories. Individual spelling lists can then be devised based on the sorts, combined with teacher-selected high-frequency words. Check-up tests can be given individually (or in partners) to provide feedback on progress. This approach to spelling is quite concurrent with present research and provides a way for students and teachers to

work cooperatively in the discovery of the patterns and ways that words relate and are thus spelled. Although research has not been extensive, initial feedback has been very positive, with both students and teachers reporting improvement in student spelling ability and increased strategies for spelling in writing (Zutell, 1996).

Sitton (1997a,b) has developed another, more structured approach to spelling. This program is based on specific high-frequency words (words used the most in writing) and utilizes the strategy of visual memory while developing proofreading skills. There are three strands to this approach. First, the Core Words, derived from this list of high-frequency words, form the basis for the instructional level of spelling. Several words (the number depends on the age and grade of the children) are given orally to the children to spell in a preview. Then, the students use the independent word-study procedure to practice these words. This five-step procedure is: read the word, spell the word, cover the word, print the word, proofread the word. Independent and group activities to help the children visualize the words are used as well (Sitton, 1997a). The other major component of this program is the use of Priority Words. These Priority Words, determined by the teacher based on the level of the students' spelling in writing (and lower than the instructional level), are words which the students are held completely responsible for spelling correctly at all times. To reinforce this skill, lists of the Priority Words are posted in the classroom. The third strand, proofreading, forms the basis for evaluating the spelling progress of the students. Rather than giving tests to check spelling, students are asked to proofread writing that is important to them for the Priority Words and evaluated on whether or not they had any errors. All priority words must be spelled correctly - that is the goal of this program. Mastery is expected of Priority Words but not of Core Words. This approach to spelling relies heavily on



developing visual memory and applied proofreading skills to develop spelling (Sitton, 1997b).

Although no actual study regarding the effectiveness of this system has been done, thousands of educators in both the United States and Canada use her commonsense guidelines and attend her many seminars (Sitton, 1997a).

At virtually the opposite end of the continuum is Wilde's (1992) approach to spelling. Her development of spelling strategies is based on research done in classrooms with a grant from the National Institute of Education. Some of the findings of this study indicated that consonants are more consistent in spelling than vowels, that children spell more and more words correctly as they develop, and that children cope with the English system of spelling in consistent and systematic ways. These findings, combined with the premise that there are five realms of knowledge regarding spelling, including predictable relationships between sounds and letter, variant spellings of sounds, orthographic patterns, morphemic patterns, and historical or arbitrary spellings, led to this approach, which has no formalized set of words or even structure. Using the spelling developmental state of each child as a guide, students are grouped and given mini lessons focusing on one of the areas listed above. In addition, the following strategies are stressed and provided for in the classroom: placeholder spelling (temporary spelling used until correct spelling can be identified); human resources (including other children); textual resources; generation, monitoring, and revision (keep trying until you get it right); and ownership (the final stage in which spelling is automatic). This system is very individualized and based on the premise that providing lots of reading and writing experiences will provide the necessary opportunities to explore the spelling system at an individualized pace, thus ultimately creating spelling proficiency (Wilde, 1992).

Perhaps the most frequently touted and most adapted approach to spelling today is that of Cunningham (1995). This approach is based on various research studies, including one in 1990 that compared spelling performance of both male and female first graders when writing words versus spelling with letter tiles or typing on the computer. This study indicated actual writing is a better way to improve spelling acquisition (Cunningham & Stanovich, 1990). Similarly, a study done in 1991 with fourth, fifth, and sixth graders found significant correlations among spelling, vocabulary, word knowledge, and general information (Cunningham & Stanovich, 1991). Such findings led to the development of a three-pronged approach to the teaching of spelling. Spelling is developed through phonetic patterns, visualization, and connecting meaning to words. Patterns are developed through Making Words activities, which are also multi-sensory. In this activity, students are given selected letters and then use them to build two-letter words, then three, then four, until finally all the letters are used to make a culminating word. The words are then sorted into patterns. Visual memory is strengthened through What Looks Right activities. These activities focus on words with the same pronunciation but different spelling patterns. Children are encouraged to “have a go” at the words and write them to see which one indeed looks right. After each child writes it and decides which way looks right, a dictionary is used to check the correct spelling. Finally, in teaching high-frequency words, this system provides a way for students to associate meaning with the words before practicing them. Then these words are put on a Wall of Words for the children to refer to. This Word Wall serves as a springboard for many spelling activities and as an aid for both reading and writing. Although the result of using this system have not yet been fully studied, it embraces current research and utilizes the three main ways to develop spelling strategies (Cunningham, 1995).

Many other educators and researchers have taken the principles or the main components from the approaches discussed above, particularly the Word Wall, and adapted them to help develop spelling strategies in similar yet sometimes unique ways. For example, Wagstaff (1995) uses the Word Wall to develop analogy strategies. This Word Wall is organized by vowel schemes, and children develop the strategy of using onset (beginnings of words) and rime chunks (vowels chunked with the ending sounds) to see spelling patterns and thus spell unfamiliar words. High-frequency words are placed on a Help Wall (Wagstaff, 1995). Oldrieve (1997) took the Word Wall concept one step farther and combined it with the strategy of comparing and contrasting rhyming words to create a structured internalization spelling method. Words from the Word Wall form the basis for this system of daily spelling tests based on onset-riming words (Oldrieve, 1997). Another application of the Word Wall has been to turn it into a Thematic Word Wall (Robb, 1997). Using rhymes to develop phonological spelling patterns led Dye and McConnell (1997) to create a five-step lesson plan teaching reading and spelling strategies this way.

Researchers such as Yoshimoto (1997) have found that using the structure of the language, including roots and suffixes, is also helpful in developing spelling strategies. Teaching spelling through the structure of the language was done for gifted, gifted/at risk, and learning-disabled students at a private, accredited school from 1991-1997. During this time period, Yoshimoto (1997) found that all teachers, regardless of the exceptionality of their students, noted positive benefits from this strategy. It was also found to positively affect the self-esteem of the students with learning disabilities (Yoshimoto, 1997).

As can be seen from the foregoing discussion, spelling is indeed an integral part of any

classroom today. The teaching of spelling strategies “. . . can be effectively employed with students in primary school through high school” (Fulk, 1997, p.70). It does not seem important or necessary that one embrace any one particular approach to the teaching of spelling strategies; what is important is that children are indeed taught spelling directly. Teaching spelling strategies that develop phonological associations, morphemic understandings, and visual memory are the key to creating students who can spell. As the educators and researchers in the foregoing discussion have done, this project will attempt to take the strategies that research has shown are effective, namely visual memory, graphophonic relationships, and language structure, and use them to improve the spelling of the targeted first and third graders in their daily writing.

#### Project Objectives And Processes

As a result of teaching spelling strategies during the period of September, 1997, to November, 1997, the targeted first and third grade classes will increase their ability to spell correctly in their daily writing, as measured by writing samples and report card grades in spelling.

As a result of teaching spelling strategies during the period of September 1997, to November 1997, the targeted first and third grade classes will improve their attitude concerning how well they spell, as measured by a student survey.

In order to accomplish the terminal objectives, the following processes are necessary:

1. Materials that foster the learning of spelling strategies will be developed.
2. A series of activities that address spelling strategies will be constructed for all subjects.
3. The series of activities will be integrated into all subjects.
4. Student writing samples will be evaluated for spelling.

5. Student attitudinal surveys will be formulated and used pre- and post-intervention.

### Project Action Plan

\* T stands for teacher; S stands for students

#### I. Week 1: Background Information

- A. Administer Parent Survey to Site A parents during first day parent orientation and to Site B parents during Open House (T\*)
- B. Obtain student writing sample using stem, "What I want to learn in \_\_\_\_\_ grade." (T)

#### II. Week 2: Student Attitudes Surveys

- A. Administer Student Surveys (T)
  - 1. Administer surveys individually to first graders at Site A (T)
  - 2. Administer surveys as a class to third graders at Site B (T)
- B. Administer Self-Assessment Checklists (T)
  - 1. Administer checklists individually to first graders at Site A (T)
  - 2. Administer checklists as a class to third graders at Site B (T)

#### III. Week 3: Language Experience Strategy

- A. Write morning message (T, S\*)
- B. Write mystery message (T, S)
- C. Write dictated experiential message (T, S)
- D. Reassemble scrambled messages (S)
- E. Collect and evaluate student writing samples (T)

IV. Week 4: Word Wall Strategy

- A. Brainstorm words from readings; list with page number (T, S)
- B. Assign words to similar rimes on wall (T, S)

V. Week 5: Have-a-Go Strategy

- A. Model finding misspelled words when proofreading (T)
- B. Model rewriting misspelled words (T)
- C. Come up with mnemonics to help with spelling (T, S)
- D. Collect and evaluate student writing samples (T)

VI. Week 6: Sound Hunt Strategy

- A. Find and list words with particular sounds (T, S)
- B. List and discuss patterns (T, S)

VII. Week 7: Word Hunt Strategy

- A. Find words within words (T, S)
- B. Find words that have similar patterns (T, S)
- C. Introduce games in Spellbound on computer (T)
- D. Collect and evaluate student writing samples (T)

VIII. Week 8: Concept Attainment Strategy

- A. Model concept according to sounds (T)
- B. Model concept according to patterns (T)

IX. Week 9: Inductive Strategy

- A. Brainstorm words for particular sound, meaning or spelling pattern (T, S)
- B. Group words according to rule (individually, partner, group) (S)

- C. Glue words in web form on construction paper (S)
- D. Explain groupings to class (T)
- E. Collect and evaluate student writing samples (T)

X. Week 10: Rhyming Strategy

- A. Choral read poem with covered rhyming words (T, S)
- B. Discuss which words make sense according to meaning and spelling (T, S)  
(optional- have the students clap the syllables)

XI. Week 11: Making Words Strategy

- A. Make as many words as possible with given letters (S)
- B. Discuss list made and patterns in words (T, S)
- C. Collect and evaluate student writing samples (T)

XII. Week 12: Practice Using Strategies

- A. Review use of all strategies (T, S)
- B. Practice using various strategies, identifying the ones used (S)

XIII. Week 13: Student Attitudes Re-Evaluation

- A. Administer Student Surveys (T)
  - 1. Administer surveys individually to first graders at Site A (T)
  - 2. Administer surveys as a class to third graders at Site B (T)
- B. Administer Self-Assessment Checklists (T)
  - 1. Administer surveys individually to first graders at Site A (T)
  - 2.. Administer surveys as a class to third graders at Site B (T)
- C. Collect and evaluate student writing samples (T)

### Methods of Assessment

In order to assess the effects of teaching spelling strategies, student attitudinal surveys and self-assessment checklists will be administered both pre- and post- intervention. In addition, student writing samples will be evaluated for spelling every two weeks during the intervention, along with the initial and final writing sample evaluations. Finally, a journal containing anecdotal information will be kept by both teachers throughout the entire intervention period.



## CHAPTER 4

### PROJECT RESULTS

#### Historical Description of the Intervention

The objective of this project was to improve students' spelling in their everyday writing. The students of the targeted first and third grade classes had demonstrated an inability to utilize strategies for correct spelling in their daily work. The direct teaching of spelling strategies was selected to effect the desired changes.

Spelling strategies utilized included an array of constructivist techniques designed to develop individual spelling awareness and metacognition. The language experience strategy taught the students to look for spelling patterns within everyday writing (Appendix E). They would mentally replace letters or word parts missing in words or sentences. Rimes for particular word patterns were then assigned to a word wall for students to reference while writing. To familiarize the students with visual spelling patterns, students practiced spelling words from their own writing with the Have-A-Go strategy (Appendix F). The sound hunt strategy assisted the students in searching for words with particular sound patterns and corresponding spelling (Appendix G). Similarly, the students used the word hunt strategy to select words from within their everyday reading that fit the pattern being sought (Appendix H). The concept attainment strategy enabled the students to discern the differences between spelling rules and their patterns (Appendix I). Using the inductive strategy, students developed spelling categories inductively

based on their awareness of the given patterns (Appendix J). Poetry provided the focus for comparing and contrasting the various spelling patterns used for particular sounds. Students also learned to create words using the make-a-word strategy (Appendix K).

The implementation of these strategies varied between the two sites to meet the needs of differing student ages and development. For the first graders at Site A, all activities were either teacher directed or teacher facilitated and done as a class in school. At Site B, the teacher/researcher initially introduced the strategies to the third graders through mini-lessons and monitored student-directed activities. Some of the reinforcement strategies were done individually as homework as well.

Original plans called for strategy implementation individually each successive week. As the researchers began the intervention, they realized the necessity of maintaining the strategies once introduced. Daily integration of the previously-introduced strategies provided the necessary reinforcement and continuity. Researchers also found that assessment of student spelling on a bi-weekly basis was unrealistic and did not allow for sufficient change to occur. Assessment was thus modified to beginning, middle, and end of the intervention period. To maintain consistency with pre and post assessment, the researchers also developed a writing stem for the final assessment (Appendix L), while intermediary assessments used free choice writing samples.

#### Presentation and Analysis of Results

In order to assess the effects of constructivist spelling strategies on students' writing, samples of students writing were collected, and the percentage of correctly spelled words was tabulated at the onset, the midpoint, and the conclusion of the research intervention. The following graphs depict the results of these tabulations.

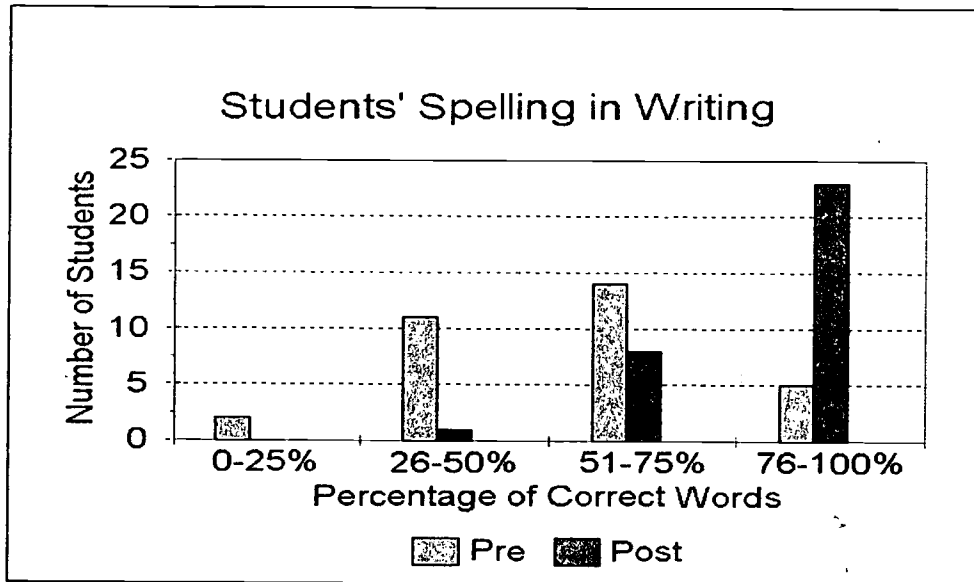


Figure 3. Percentage of Words spelled correctly in relation to the number of words written by students at Site A pre- and post-intervention

As shown in the above figure, the intervention appears to have had a very positive impact on the students' spelling within their writing. The scores of the targeted first graders at Site A had an initial concentration in the middle two quartiles. The midpoint sample shows a significant change, with only 25% of the scores falling in the middle quartiles and 75% of the scores moving up into the top quartile. Similar results marked the final writing sample, with only a variance of one student between the third and fourth quartile. Because there was no significant change in results between the midterm assessment and the final evaluation of the students' spelling performance in their writing, the graph only shows the pre- and post- intervention data. It is interesting to note, however, that the greatest growth took place early in the intervention period.

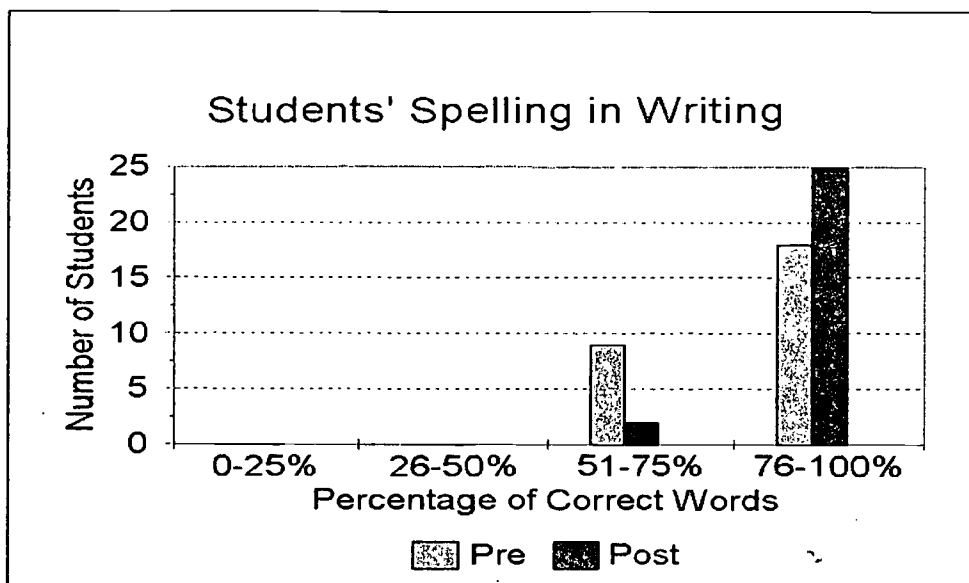


Figure 4. Percentage of words spelled correctly in relation to the number of words written by students at Site B pre- and post-intervention.

As shown in this figure, the initial scores of the targeted third graders at Site B were concentrated in the upper two quartiles, with 28% of the students in the third quartile and the rest of the sample in the last quartile. At the midpoint assessment, there were only two students in the third quartile, with the remainder of the class in the fourth quartile. The final writing sample showed no change from the midpoint assessment; thus, the pre- and post-graph shows the change brought about by the intervention.

Student surveys administered pre- and post-intervention were also examined for changes in attitude and awareness of spelling strategies. The most significant change was in the attitude toward spelling in general; students in both targeted groups showed an increase in the levels of perceived importance of spelling words correctly. In relation to the awareness of the various

spelling strategies, both targeted groups of students became more evenly distributed (Appendices M and N).

### Conclusions and Recommendations

Based on the presentation and analysis of the data on spelling within student writing, the students showed a marked improvement in the use of correctly spelled words. Because of increased confidence in using spelling strategies while writing, the students became more prolific writers as well. For example, students in the targeted first grade wrote approximately twice as much by the end of the intervention, while the targeted third graders wrote about a third more words in their essays. In addition, their awareness of and attitude toward spelling reflected a positive change. Within class discussions, as well as during individual reading and journal writing, students used terminology directly derived from spelling strategy lessons on a regular basis. Student interactions reflected the internalization of the various strategies. Because students have become more self-reliant when writing, teacher time spent on assisting students with spelling has also been reduced. Teachers/researchers have observed the increased use of such strategies as word walls, book resources, sound patterns, peer editors and visualization techniques during Writers Workshop.

The researchers intend to continue using the various strategies with future classes but with closer integration into reading, phonics, and language arts subjects rather than as a separate entity. The researcher at Site A anticipates continuing the strategies as implemented due to the fact that first graders have had no prior exposure to spelling techniques. The researcher at Site B plans to reduce the allocated time spent on separate spelling lessons but will integrate the strategies more fully into the current language arts curriculum, which, for the past six years, has had no spelling

program whatsoever. As a result, the researcher at Site B will present these findings to the district language arts committee in order to help determine whether a spelling program utilizing these strategies will be implemented district-wide.

Overall, the strategies implemented were highly effective in improving students' spelling within their writing. In order to achieve this effectiveness, however, time devoted to this endeavor was substantial; approximately 20-25 minutes per day. The researchers recommend, therefore, that initial introduction to the strategies should be in the first few years of schooling. If implemented in this manner, the subsequent grades would only need to reinforce and maintain these strategies.

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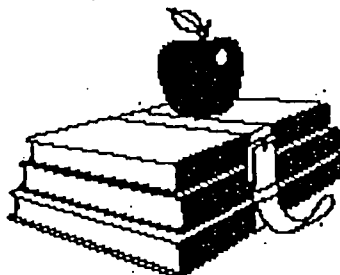
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## Appendices



Appendix B  
Cover Letter to Parents



September 1997

Dear Parents,

As part of the Master's Program at St. Xavier University, an action research project is required. The focus of the project I have chosen is the effect that teaching spelling strategies in multiple ways has on spelling performance within student writing. Attached is a survey concerning parent attitudes and backgrounds regarding spelling. Please take a few moments and complete this survey to the best of your knowledge. Your personal comments are welcome and appreciated. Thank you in advance for your support in this endeavor to help your children achieve even more success in their writing.

Sincerely,

## Appendix C Parent Spelling Survey

### Parent Spelling Survey

Please read the questions below and circle the answer that most closely describes your opinion.

1. How well do you think your child spells?  
 A. Not well at all    B. Not well    C. Usually well    D. Very well
  
2. How do you see yourself as a speller?  
 A. Poor    B. Satisfactory    C. Good    D. Excellent
  
3. What do you do when you are unsure of a word's spelling?  
 A. Ask someone    B. Look it up    C. Sound it out    D. Write it until it "looks right"
  
4. What does your child do when he/she cannot spell a word?  
 A. Asks you how    B. Looks it up    C. Sounds it out    D. Writes it until it "looks right"
  
5. How important do you think spelling is?  
 A. Not important    B. Somewhat important    C. Important    D. Very important
  
6. How did you learn spelling when you were in grade school?  
 A. Teacher-selected lists    B. Student-selected lists    C. No lists    D. Workbook/Phonics
  
7. What do you think is the most effective way to teach spelling?  
 A. Phonics    B. Commonly misspelled words    C. Drill and practice    D. Reasoning

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

STUDENT'S NAME (OPTIONAL) \_\_\_\_\_

THANK YOU FOR YOUR TIME!!

Appendix D  
Student Spelling Survey

## Spelling Survey

Read the questions below and circle your best answer.

1. What do you do when you don't know how to spell a word?
  - A. Use a dictionary
  - B. Ask someone
  - C. Sound it out
  - D. Write it until it "looks right"
  
2. What helps you spell a difficult word?
  - A. Think of a trick/rule
  - B. Use a rhyming word
  - C. See it in your head
  - D. Write it down
  
3. Does each letter in a word stand for a sound?
  - A. Never
  - B. Sometimes
  - C. Most of the time
  - D. Always
  
4. How important is it to you to spell words correctly?
  - A. Not important at all
  - B. Somewhat important
  - C. Important
  - D. Very important
  
5. Are you a good speller?
  - A. Never
  - B. Sometimes
  - C. Most of the time
  - D. Always
  
6. What do you think of spelling?
  - A. It is very hard
  - B. It is somewhat difficult
  - C. I get by
  - D. It is very easy

## Appendix E

### Language Experience Strategy Instructions

#### Language Experience Approach

1. Share an experience with your students (go outside, read a story, make popcorn, take a field trip). Any experience, large or small, will do.
2. Discuss the experience with the class for a couple of minutes.
3. Invite the students to help dictate a story about the experience.
4. Students raise their hands to supply sentences.
5. The teacher writes the sentences on chart paper or on the board (if paper is not available).
6. While taking the dictation, the teacher invites the class to help with the spelling of words and with supplying the punctuation. ("Who knows what sound, and what letter, the word begins with?" and "Who knows how to spell the?") The story should be no more than 4 to 6 sentences long so that students can easily use their memory to "read" the story. This is called memory support.
7. Students help to read the story aloud several times. The teacher supplies the words that the students don't know. This is called support reading.
8. Ask individual students to read sentences or the entire story.
9. Ask individual students to come up and point to words that they know. ("Mary can you come up to the board and point to a word that you know and tell us what it is?")
10. Teacher points to some words and asks whole class or individual students to call them out.
11. Students help teacher decide which words will be placed on Word Wall.
12. If students are able, they can copy the story and illustrate it.





## Appendix G Sound Hunt Strategy

The students are told to hunt in their reading and writing for words that follow given sounds or patterns. The teacher then models some of the correct words which match those patterns.

After collecting and listing ten words each, the students dictate one word each to the teacher. The teacher proceeds to list them on chart paper, checking each given word for the correct word type. The students copy new words onto their list as they are written.

Activities are then done with "found" words such as: "cut and paste" inductive lessons for various spelling patterns, discovery and discussion of "rules" that students come up with, development of mnemonic devices to help with spelling/reading, composing of rhyming/syllable poems with the words.

### Basic Word Sounds

Long a	Short a
Long e	Short e
Long i	Short i
Long o	Short o
Long u	Short u

### Basic Word Part Patterns (phonograms)

ack	eat	ice	ock	uck
ail	ell	ick	oke	ug
ain	est	ide	ip	ump
ake	ed	ight	ore	unk
ale		ill	ot	
ame		in	op	
an		ine	or	
ank		ing		
ap		ink		
ash		ip		
at		it		
ate		ir		
aw				
ay				
all				



Appendix I  
Concept Attainment Strategy

CONCEPT ATTAINMENT

FOCUS STATEMENT:

HYPOTHESES

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_

CONCEPT LEARNED:

Appendix J  
Inductive Strategy

Subject :

Name:

**INDUCTIVE LESSON**

1. Data set:

2. Group data

3. Label groups

a. within group comparisons

b. across group comparisons

What do you notice?

What do you see?

What do you find?

4. Identify the characteristics of groups

5. Explain

Why does this happen?

6. Apply

What would happen if...?

(new words were added, certain words were added, if labels were changed, etc..)



Appendix L  
Student Writing Stem: Post-Intervention



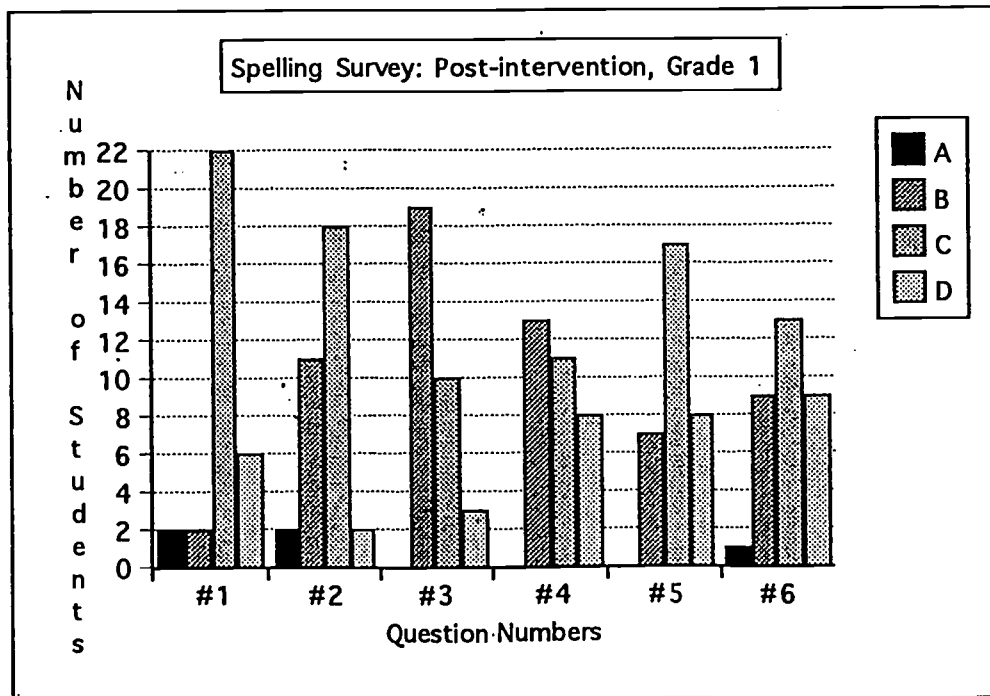
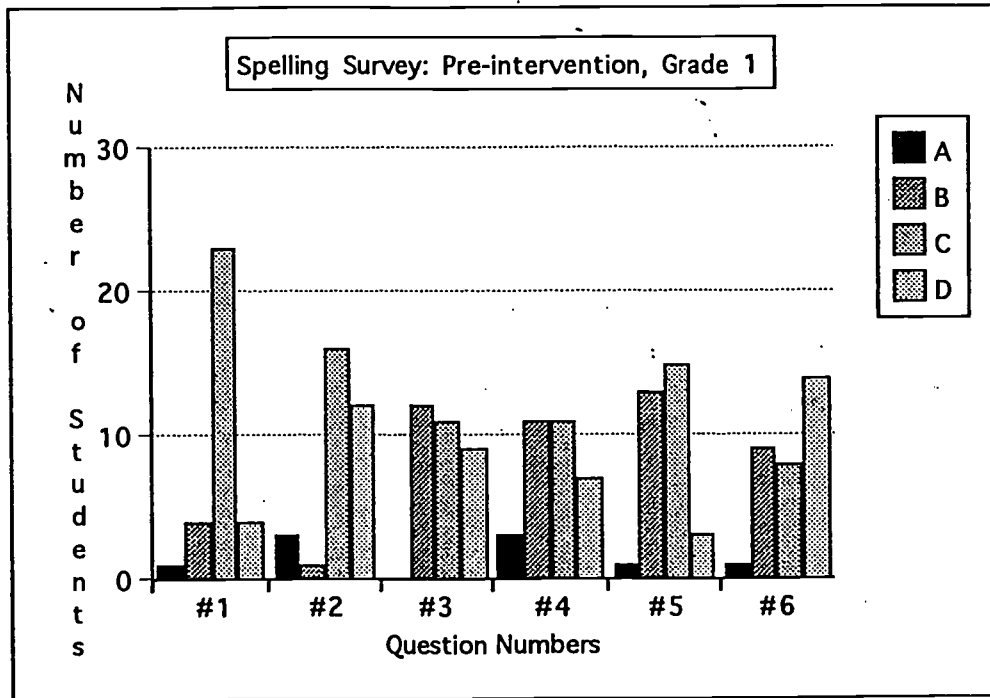
Name \_\_\_\_\_

Date \_\_\_\_\_

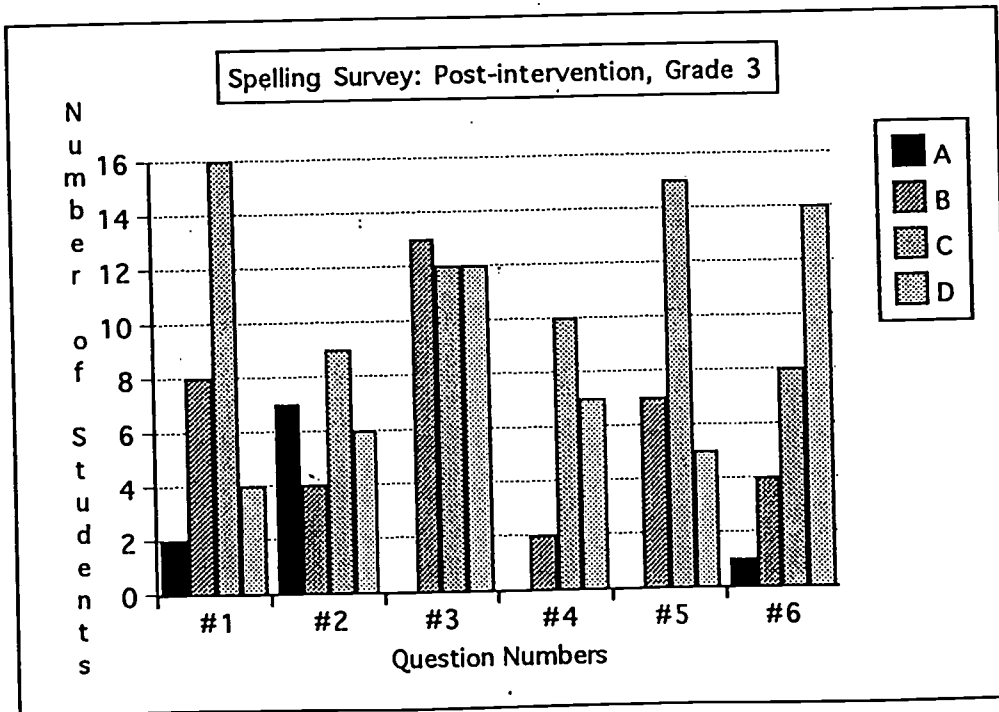
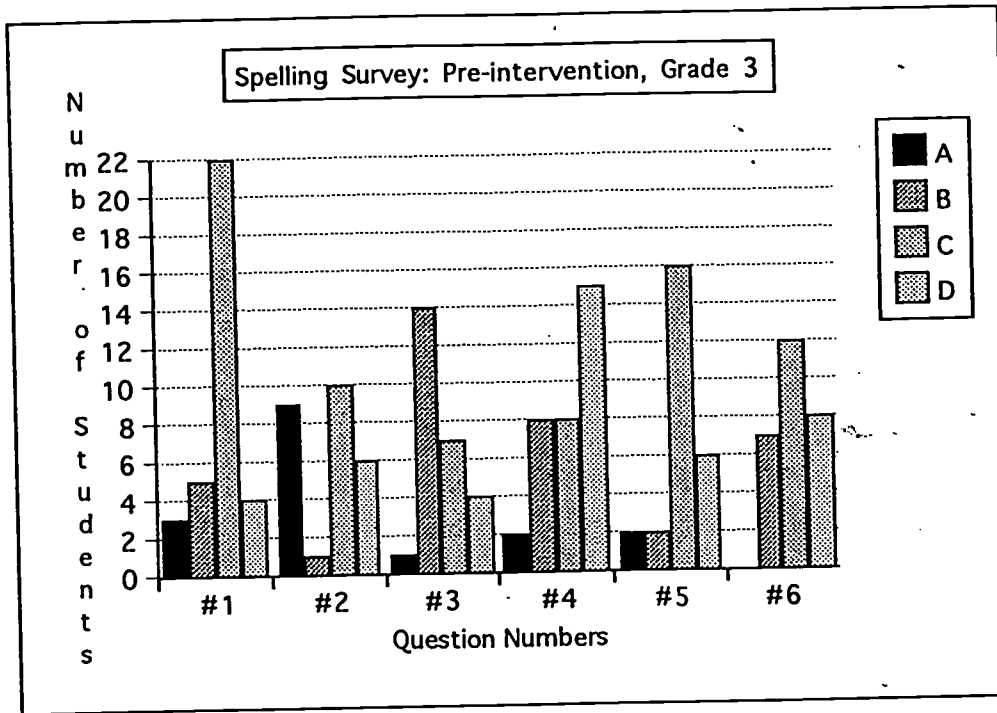
The Best Part of my Winter  
Vacation was....

A series of horizontal lines for writing, consisting of 14 lines below the main text area.

Appendix M  
Student Survey Results, Site A



Appendix N  
Student Survey Results, Site B





CS 013270



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