Word Study: A Look at Improving Learning and Retention of Spelling

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Abstract:

The purpose of this paper is to share the effectiveness of the word study program *Words Their Way* (Bear et. al., 2008) to improve spelling retention of first graders in a regular education classroom in the Spring of 2012. After implementing a traditional spelling program and seeing students continuously spell previous spelling words wrong, different word study programs were researched and decided *Words Their Way* (Bear et. al., 2008) was a viable option. Therefore, *Words Their Way* (Bear et. al., 2008) was implemented. The data tools used were: spelling pre and post tests, teacher made tests, checklists, Likert scales, anecdotal records, writing artifacts, teacher student interviews, and a teacher journal. . Students were grouped according to their stage in spelling development and instructed accordingly.   It was shown *Words Their Way* (Bear et. al., 2008) allows individualized instruction to meet the development spelling levels of all students

Introduction:

Currently, I teach first grade at Oak Ridge Elementary in Royal Oak, Michigan. During the

research of this project it was my third year teaching and my second year teaching first grade.

Prior to teaching first grade, I taught one-half day of Kindergarten. I have been at Oak Ridge my

entire teaching career. Royal Oak is comprised of predominantly middle class families, about

twenty miles northwest of Detroit. The School District of the City of Royal Oak is made up of

one high school, one middle school and six elementary schools. There are many hospitals,

offices and automobile businesses in the area that provide jobs to families in the area. Our

Parent Teacher Association is active with 100% teacher participation. I have five regular parent

volunteers that work in my classroom or do clerical work as needed. Oak Ridge is a

Kindergarten through Fifth grade school and there are 443 students. Of those students, only

thirteen are African American and less than forty are Indian, Asian, Hispanic or Hawaiian. Of

my twenty-eight students, twenty-six are Caucasian, one student is of Mexican decent and one

student is African American. I have fifteen girls and thirteen boys. Three students in my class

are eligible for free and reduced lunches. Two of my students are raised in single parent

households. Three students are from divorced families but see both parents often. I have two

students who receive special education services. These students are mainstreamed into the

classroom, but are pulled out of the classroom for academic and speech and language support.

They also receive Tier Two interventions from the Response to Intervention coordinator in the

building. Tier Two interventions give extra support to students who need more than what the

classroom teacher can provide. Approximately ten students are below grade level in reading and

receive Tier One interventions. These interventions are provided by myself and are within the

classroom. These support interventions include extra time on the student computer, sight word

flashcards, and having access to additional materials.

Literature Review:

Bear, D. R., Invernizzi, M., Templeton, S., & Johnston, F. (2008). Words their way, fifth edition.

      Boston. Pearson.

Words Their Way is the word study program that I will be implementing during my action

research project. The program requires me to give my students a spelling inventory initially. I

will then group my students according to their readiness. Instruction will be differentiated

determined by their word study groups. Students will begin to explore word patterns and

phonemic awareness to successfully learn spelling words opposed to traditional rote learning and

drilling.

Berninger, V., & Fayol, M. (2008). Why spelling is important and how to teach it effectively.

      Encyclopedia of Language and Literacy Development (pp. 1-13). London, ON: Canadian

      Language and Literacy Research Network. Retrieved from

      http://www.literacyencyclopedia.ca/pdfs/topic.php?topId=234

Berringer and Fayol believe spelling is a sort of code and there are three different codes for

spelling: phonological code, orthographic code and morphological code. In order to become a

proficient speller, people must have knowledge and awareness of the three codes. Knowledge of

spelling, "may be expressed as rules, statistical patterns, or procedures and these different kinds

of knowledge have various implications for instruction" (Beringer & Fayol, 2008, p. 1). Words

Their Way is a program that supports teaching students about knowledge of word patterns,

therefore Berringer and Fayol's report will support my action research project.

Conniff, A., Crowe, D., Darch, C., Eaves, R., & Simmons, K. (2006, Winter). Teaching spelling

      to students with learning disabilities: A comparison of rule-based strategies versus

      traditional instruction. Journal of Direct Instruction, 6(1), 1-16.

This study compared two strategies for teaching spelling: traditional versus rule-based

instruction. It was conducted on students with learning disabilities. The results from this study

indicated the students whom received rule based instruction performed better than students who

received traditional spelling instruction. Although my entire class will receive rule-based

spelling instruction, the results from this study supports my hypothesis on my action research

project. The authors also state that "a major purpose of increasing spelling accuracy is not

mastery in isolation on a spelling test but accuracy within the written text" (Conniff, Crowe,

Darch, Eaves, Simmons, 2006, p. 14). One of the reasons I chose my action research topic was

because I was seeing students spell words correctly on spelling tests, then not transferring

spelling skills in daily writing.

Cook, J. (2003). The effects of word sorting on spelling retention (Unpublished master's thesis).

      Retrieved from: http://learningandteaching.org/Research/Papers/Cook.pdf. Viterbo

      University, La Crosse, Wisconsin.

Through Jennifer Cook's research for her thesis, she found an underlying trend from teachers

who believe spelling programs are inadequate and retention is poor within students. She states

that, " Word study, specifically word sorting, has emerged as one method that meets the

challenge" (Cook, 2003, p. 7). The purpose of her study was to determine the effects of teaching

word study to fourth and fifth graders. I will be teaching word study to first graders but the

effects should be similar, therefore, this thesis will benefit my action research project.

Erdogan, O. (2011). Relationship between the phonological awareness skills and writing skills of

       the first year students at primary school. Educational Sciences: Theory and Practice, v11

       (3), 1506-1510. Retrieved from http://www.eric.ed.gov/PDFS/EJ936331.pdf.

This article will be beneficial to my action research project because it highlights the importance

phonological awareness has on the writing of young students. The students from this article are

in their first year of primary school which will support my research on first grade students. This

article supports the role phonological awareness has on effectively learning how to spell. With

the implementation of Words Their Way in my classroom, hopefully my students will transfer

the phonological skills they will gain into their daily writing.

Radke, J. (2011). Does word work really work? Investigating the effects of word work vs.

       traditional spelling instruction during guided reading (Unpublished master's thesis).

       Retrieved from http://minds.wisconsin.edu/handle/1793/55791. University of Wisconsin:

       River Falls, Wisconsin.

The author of this master's degree research project, Jessica Radke, conducted an action research

project on three students to determine if word study improves reading scores more than a

traditional spelling program. She also used a survey asking students if they preferred the word

study approach to spelling or the traditional word study approach. I will be using a similar

survey to determine if students prefer small group word study instruction or whole group spelling

instruction. Radke also has a section in her report regarding why teachers should use word study

opposed to traditional spelling instruction. She believes rote memorization is not an effective

way to learn spelling and teaching students about words is a more effective approach. She also

believes differentiating instruction and giving developmentally appropriate word lists for student

learning is more beneficial. She wrote, "students' learning of spelling and vocabulary is based

on their developmental or instructional level"(Radke, 2011, p.7). This portion will be beneficial

for supporting my action research project and the presentation for my staff showing the results.

Scott, R. M. Word study and reading comprehension: Implications for instruction. Retrieved

        from: http://www.edu.gov.on.ca/eng/research/mcquirter.pdf.

Scott suggests word study, reading comprehension and writing are all necessary components of

literacy that intertwine. Because three parts of literacy are interrelated, when one area improves,

another area also benefits from those improvements. Therefore, if Words Their Way improves

knowledge of spelling and is a more effective method of teaching spelling, other areas of literacy

should also improve. This reference will support my action research project because the report

suggests study and knowledge of words improves literacy rather than teaching spelling through a

traditional approach.

Sterbinsky, A. (2007). Words their way spelling inventories: Reliability and validity

        analyses. The University of Memphis: Center for Research in Educational Policy.

Allan Sterbinsky conducted a research study on the validity and reliability of using Words Their

Way with seven participating schools. Of those seven schools, five were elementary schools.

Sterbinsky used a total of 4290 students in this study. The information in Sterbinsky's study is

valuable to my research project as it will hopefully support my research topic. I am using

inventories as a data sources and Sterbinsky's research concluded the "inventories are reliable

instruments and valid predictors of student achievement" (Sterbinsky, 2007, p. 20).

Wasowicz, J. (2010). Improving written language using a multiple-linguistic spelling word study

      approach. Learning by design, Inc. Retrieved from

      http://www.learningbydesign.com/uploads/Multiple-

      Linguistic_Spelling_Word_Study_Approach.pdf

This document stressed individuals "rely upon phonological awareness and knowledge of

orthography, vocabulary, and morphology and semantic relationships. They also rely upon

mental orthographic images stored in their long-term memories" (Wasowicz, 2010, p.1). This

article will support my theory that students will not learn spelling words or patterns without

being exposed to the words many times, learn why words are spelled the way they are and how

to differentiate different spelling patterns. This article also suggests literacy is an equal

combination of spelling, reading and writing and designated literacy blocks should be in place.

Wilson, K. (2007). Improving the Mastery and Retention of Spelling. Retrieved from

      http://teachingthekids.wordpress.com/2011/12/23/improving-the-mastery-and-

      retention-of-spelling/

The author of this article has been a teacher for twenty three years with experience in

Kindergarten through sixth grade. Her article is about research two teachers, Wilson and Osland,

conducted in their third grade classrooms. Both teachers noticed that "a majority of the students

were performing well for spelling tests, but were not demonstrating knowledge of their words

post-test in reading and writing areas, therefore, causing the researchers involved to believe it

was a result of not meeting individual needs with effective strategies" (Wilson, 2007). Their

concerns led these teachers/researchers to investigate effective teaching strategies. "The

common strategy is word sorting" (Wilson, 2007). When I implemented *Words Their Way* (Bear

et. al., 2008) the strategy my students used was sorting, therefore, this article supports my action

research project.

Research Process:

Appendix A

Research Questions	Data Source		
	1	**2**	**3**
1. How will teaching spelling using a word study approach improve retention of spelling patterns?	Spelling Pre Test	Spelling Post Test	Teacher Made Tests
2. What are the effects of teaching spelling in differentiated small group instruction?	Checklists	Likert Scale	Anecdotal Notes
3. How will implementing a word study program improve spelling in daily writing?	Writing Artifacts	Teacher/Student Interviews	Teacher Journal

One of my research questions is: How will teaching spelling using a word study approach

improve retention of spelling patterns? To answer this question, I used the following data

collection techniques: pre and post spelling inventories and teacher made tests. All three of these

data collection techniques are qualitative. The pre test indicate the spelling patterns students had

mastered and informed me of the instructional spelling stage they were in at that time. Then I

was able to place my students in appropriate spelling groups. The pre and post tests included the

same words with spelling features to be taught throughout the implementation of *Words Their*

Way (Bear et. al., 2008). I compared the results of the before and after inventories to determine

whether the patterns taught were retained, therefore, answering my research question. The

teacher made tests were weekly spelling tests. Dorothy Korzym stated, "when you analyze your

data, you need to summarize it, you need to reflect upon it, you need to write out what you

found" (2007). The teacher made tests informed me if my students learned the patterns long

enough to pass the spelling test. If they were able to spell these words correctly, the post

inventory informed me if they learned the spelling patterns and could apply them into their daily

writing.

My second research question is: What are the effects of teaching spelling in differentiated

small group instruction? To answer this question, I used the following data collection

techniques: checklists, likert scale and anecdotal observations. These three data collection

techniques are qualitative. While teaching in small groups, I observed students working and

recorded on a checklist if students were engaged or not. This helped me to answer my research

question and know if teaching in small group improves attention of students and therefore,

improves their learning of spelling material. The likert scale asked them if they agreed or

disagreed with comments regarding spelling instruction. It will provide information on how they

prefer to learn spelling: small group or the traditional spelling implemented prior. I asked

students if they believed they learn better with a smaller group or as the whole class. Lastly,

anecdotal records are kept to make observations, summaries, "of what the students had to say"

(Mills, 2011, p. 79), and comments to be looked at another time.

My third research question is: How will implementing a word study program improve

spelling in daily writing? The data collection techniques that I used to answer this question are:

artifacts, such as writing samples with a rubric indicating how often students are spelling words correctly in their daily writing, teacher/student interviews and a teacher journal. The rubric for daily writing was a quantitative tool and was assessed by using a three point rating scale. It is a valid tool to use to answer this research question because it directly measures what the question asks authentically. Interviews between the teacher and student are qualitative data sources. Interviews with students would include questions that, "vary from convergent to divergent," meaning they are both open-ended and closed questions (Mills, 2011, p. 79). Students were asked how they were performing, how their spelling skills have improved and if their confident in spelling previous spelling words correctly. A teacher journal is also a qualitative data collection technique. It includes biased free comments of students' growth and progress, reflections made of small group lessons, comments students made and specific suggestions for future lessons.

Data Analysis:

Research Question 1- How will teaching spelling using a word study approach improve retention of spelling patterns?

Data Source 1- Spelling Pretests

In March, students were given a spelling pretest (found in Appendix B) of twenty-six words ranging in spelling features. The purpose of this inventory was to determine what spelling stages the students were in and what spelling features they had and had not mastered at that time. Total feature points were also assessed and used to compare at the end of the data collection period. The inventory results were also used to place the students in differentiated instructional spelling groups.

During the assessment, words were read off to the whole class. The students wrote the

word and flipped over their test and waited for the next word. The words would become

gradually more difficult. Each word has a number of feature points. For example, the word fan

has a total of three feature points, one for each feature: beginning consonant, final consonant and

short vowel. The other features being assessed on the assessment are: consonant digraphs,

consonant blends, long vowel patterns, other vowel patterns, and inflected endings. If the

student wrote the word fan with just two of the features correct, they would receive three feature

points. Students were also able to receive a point for spelling the word correctly. Using the

Feature Guide for Primary Spelling Inventory (Bear et. al., 2008, p. 302), students' feature points

and words spelled correctly were added together to get the total amount of points. An example

of the guide can be found in Appendix B. There is a total of eighty-two points possible for the

twenty-six words. Twenty-six of the total points are given for spelling the word correctly. The

remaining fifty-six points are awarded for getting feature points correct.

The Primary Spelling Inventory (Bear et.al., 2008, p. 304) awards seven feature points for

each feature throughout the assessment. For example, there were seven words on the assessment

that assessed consonant digraphs. Therefore, there are seven feature points possible for each

feature. To assess beginning consonants, the seven words assessed are: fan, pet, dig, rob, hope,

wait and gum. These words also give points for other feature areas such as ending consonants

and short or long vowel sounds.

Because spelling is developmental, students need to master certain features before being

expected to know others. For instance, students would need to be able to produce beginning and

final consonants before being expected to produce consonant digraphs or blends. The four

developmental spelling stages this research project concerns are: emergent, letter name-

alphabetic, within word pattern and syllables and affixes. Within these four stages, students can

score early, middle or late. The emergent spelling stage includes the feature of beginning

consonants. The letter name-alphabetic stage includes the features: final consonants, short

vowels, and consonant digraphs. The within word pattern stage also includes the feature

consonant digraphs as well. The within word pattern stage also has the features consonant &

blends and long-vowel patterns. The syllables and affixes stage includes other vowel patterns and

inflected endings.

Scoring begins with the earliest spelling stage, emergent. The first feature assessed is

beginning consonants. Students would need to get six or seven right out of the seven feature

points for each feature in order to have mastered that feature. If a student made two or more

errors in a feature, they did not show mastery for that feature and instruction began with that

feature.

The results from the initial inventory show all students mastered the beginning consonant

feature. The next feature assessed is the final consonant feature. Results from the initial

inventory also show all students had mastered this feature. The next feature assessed was short

vowels. The results indicated two students did not master this feature. Both of these students

missed two of the features for short vowels. This indicated these students are in the late letter

name-alphabetic spelling stage. These students will be referred to as Group A. The next feature

assessed was consonant digraphs. Three students indicated they had not mastered this feature by

missing four or more of these features. This indicated these students are in the early within word

pattern stage. These students will be referred to as Group B. The next feature assessed was

consonants and blends. Two students made two errors. This indicates these students are in the

middle within word pattern stage. These students will be referred to as Group C. The next

feature assessed was long-vowel patterns. Sixteen students showed they had not mastered this

feature and were in the late within word pattern stage of spelling development. This group will

be referred to ask Group D. The next feature assessed was other vowel patterns. Only two

students made two errors. This indicated they were in the early syllables and affixes

developmental stage. These students will be referred to as Group E. There were three students

who made two or more errors for the inflected endings feature and were in the middle syllables

and affixes developmental stage. These students will be referred to as Group F.

**Data Source 2- Spelling Posttests**

        At the end of the eight weeks of this research project, the students were given the same

inventory (found in Appendix B). The results showed what developmental spelling stage

students scored in and what features were mastered over the period of the eight weeks. Total

Feature Points and Words spelled correctly were added together as well.

        Group A did not show any growth and stayed in the late letter-name alphabetic spelling

stage. It is important to note both students from Group A received interventions for speech and

language delays before and during the data collection process of this study. Also during the data

collection process, one of the students from Group A was recently assessed for learning

disabilities (LD) due to reading concerns from her parents and myself. The results indicated she

was borderline of having a learning disability, but is not a candidate for receiving Tier 3

interventions. She will continue to receive Tier 2 interventions through Response to Intervention

(RTI). The other student from Group A receives academic support from an Individualized

Education Plan (IEP) for Early Childhood Development Delay and has autism. Conniff, A.,

Crowe, D., Darch, C., Eaves, R. & Simmons, K. (2006, p. 1) states students with LD "are less

effective than students without disabilities in using strategies that allow for the systematic

application of spelling rules." Although neither student has definitive learning disabilities, their performance shows the lack of ability to use sophisticated spelling strategies (Conniff, A., Crowe, D., Darch, C., Eaves, R. & Simmons, K., 2006, p. 2). Conniff, A., Crowe, D., Darch, C., Eaves, R. & Simmons, K (2006, p. 14) also stated retention and transfer was poor for students with LD because they, "need more extensive practice in order to apply rule-based strategies". Two students from Group B still had not mastered consonant digraphs, but increased in the number of feature points. The third student from Group B moved from the early within word pattern stage to the late within word pattern stage. Both students from Group C showed improvement by mastering the consonant and blends feature and moved to the feature of long vowel patterns. They went from the middle of the within word pattern stage to the late within word pattern stage. From Group D, six students did not change spelling stages, but improved within the feature (scoring a higher number for the feature on the post test than they did on the initial test). Two students from Group D scored the same number of features for long-vowel patterns, but earned more points for other features, therefore increasing their total number of feature points. Two students from Group D moved up to early syllables and affixes stage and two moved up to middle syllables and affixes stage. One student from Group D scored one point less than on the initial inventory, therefore, stayed within the same developmental spelling stage. Three students actually went to a lower developmental spelling stage. One student from Group E improved in total spelling features; however, stayed at the same developmental stage. The other student from Group E passed the assessment. All students in Group F showed growth, but remained in the same developmental stage.

Data Source 3- Teacher Made tests

Over the course of this action research project, seven spelling tests were given using a sample in Appendix C. Students were given eleven to twelve words a week with common spelling features. At the end of every week, students wrote ten of those words down during a spelling test and were expected to spell them correctly. Group A's average score for the seven spelling tests was 17.1 out of twenty points, averaging eighty-six percent correct. Group B's average score for the seven spelling tests was 19.2 out of twenty points, averaging ninety-six percent correct. Group C's average score was 18.4 out of twenty, averaging ninety-two percent correct. Group D's average score was 18.9 correct out of twenty, averaging ninety-four percent. Group E's average score was 19.5 correct out of twenty, averaging ninety-eight percent. Group F's average score was 19.8 correct out of twenty, averaging ninety-nine percent.
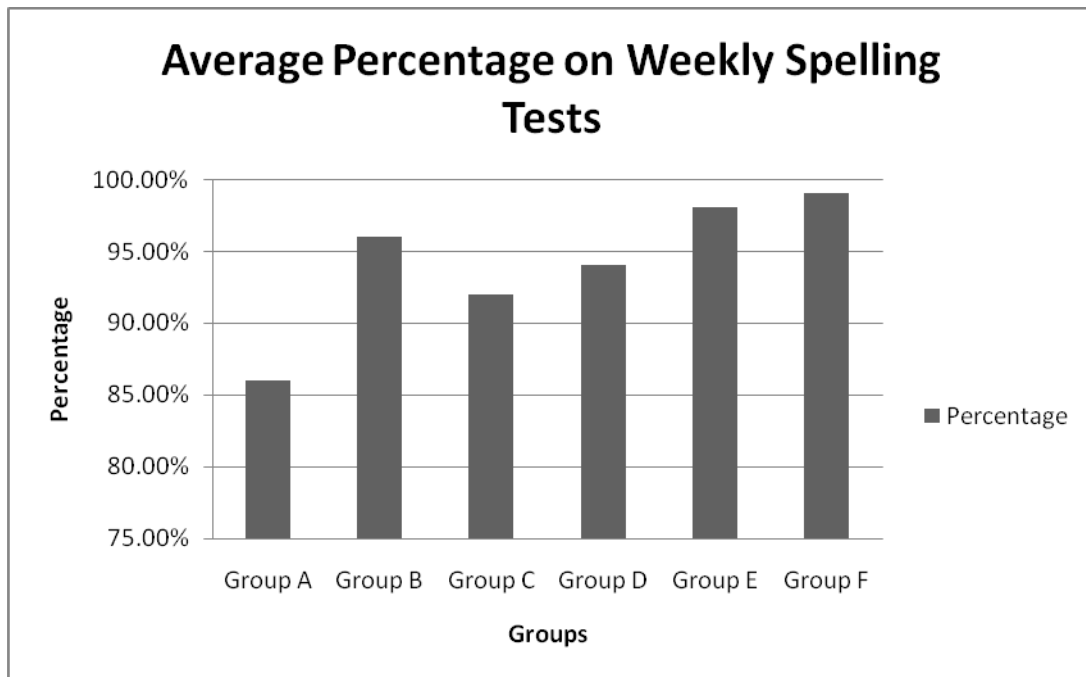
Wrap-Up

The results from the pre and posttests and teacher made tests give evidence to support that students are able to retain spelling skills from word study better than from a traditional spelling program. It is evident students who initially were at a more developed spelling stage

showed greater improvement than students who were in a lower developmental stage. Overall,

students who were more advanced in their spelling development, scored higher on their spelling

tests, therefore, were able to score better on the post spelling inventory. Students who did poorly

on their spelling tests showed little growth on their post spelling inventory. This information is

valuable because if students did not retain the spelling pattern learned and spell all words

correctly on their spelling test, they could not be expected to spell them correctly in daily writing

because they never mastered the skill. The effects of small group instruction could have played a

part in how students retain spelling features as well.

**Research Question 2- What are the effects of teaching spelling in differentiated small group
instruction?**

Data Source 1- Checklists

Checklists, found in Appendix D, were used to record students' behavior during small

group instruction. The behaviors marked on the checklists included: works with group to sort

spelling words, demonstrates proper listening skills during small group instruction, fixes and

makes changes to word sort if necessary, and volunteers to read off some words and what

patterns they have. From the checklists, it is apparent Group A had difficulty discussing and

working with their group to sort words based upon spelling features. Both students demonstrated

proper listening skills with the teacher but struggled to identify commonalities with words and

lacked engagement. They also did not make changes necessary, even when the teacher pointed

out commonalities. The checklists indicated students from Group A volunteered to read off

words; however, it was noted they volunteered to read the words after they sorted the words with

the teacher.

Students from group B also did not work together to sort spelling words. The students sat next to or near each other, but did not communicate about where words should be placed and commonalities their words had. Students in Group B did demonstrate proper listening skills to the teacher during small group instruction. The students also made necessary changes after the teacher pointed out misconceptions. Students Group B also participated in discussion and volunteered to read off their word sorts.

Group C worked well together to sort words. They communicated their inquiries about words and sorted together. They demonstrated proper listening skills with each other and the teacher during small group instruction and made changes as necessary. After they sorted their words, they were comfortable sharing. One boy from Group C did appear to be apprehensive about sharing aloud and needed encouragement.

From Group D, sixty-three percent of the students worked with the group to sort spelling words. The remaining six students did not participate in their small group's discussion about the word features. Sixty-nine percent of Group D students demonstrate proper listening skills during small group instruction. Eighty-one percent of Group D students fixed and made necessary changes to their word sorts and volunteered to read off some words and the spelling feature.

All students from Groups E and F work with their group to sort spelling words, demonstrated proper listening skills during small group instruction, and made necessary changes to their sorts. All students from Groups E and F also volunteered to read their words and the spelling feature the words have.

Data Source 2- Likert Scale

To determine students' feelings regarding differentiated spelling instruction versus whole group instruction, students completed a Likert scale survey, found in Appendix E. The students

answered each statement verbally as they were read one at time. The statements included on the scale were: I like small group better than whole class instruction for spelling, I like having a spelling list that is just right for me rather than everyone in the class having the same spelling list, I learn more when the teacher works with me in a group than I did with our previous spelling program, I would rather work in a small group than on my own, I believe word work helps me learn how to spell words correctly, and I spell old spelling words correctly in daily writing. Students answered each statement with: Strongly Agree, Agree, Undecided, Disagree, or Strongly Disagree.

Twenty-nine percent of students strongly agreed they liked small group better than whole class instruction for spelling. Forty-six percent of students agreed to this statement. Four percent were undecided. Fourteen percent disagreed and seven percent strongly disagreed to this statement.

For the statement: I like having a spelling list that is just right for me rather than everyone in the class having the same spelling list, thirty-nine percent strongly agreed. Thirty-six percent agreed to this statement. Four percent was undecided. Eleven percent disagreed while fourteen percent strongly disagreed.

Thirty-two percent of students strongly agreed with the statement: I learn more when the teacher works with me in a group than I did with our previous spelling program. Fifty-four percent of students agreed with this statement. None of the students were undecided. Seven percent of students disagreed and seven percent strongly disagreed with this statement.

For the statement: I would rather work in a small group than on my own, forty-three percent of students strongly agreed. Thirty-two percent of students agreed and four percent were

undecided. Eighteen percent of students disagreed and four percent strongly disagreed with this

statement.

Thirty-nine percent of students strongly agreed with the statement: I believe word work

helps me learn how to spell words correctly. Fifty percent agreed with this statement. Seven

percent were undecided. Three percent disagreed and there were not any students who strongly

disagreed.

For the statement: I spell old spelling words correctly in daily writing, thirty-six percent

of students strongly agreed and sixty four students agreed. There were not any students who

were undecided, disagreed or strongly disagreed with this statement.

Survey Results

Survey Statements
1. I like small group better than whole class instruction.
2. I like having a spelling list that is just right for me.
3. I learn more when the teacher works with me in a small group.
4. I would rather work in a small group than on my own.
5. I believe word work helps me learn how to spell
6. I spell old spelling words correctly in daily writing.
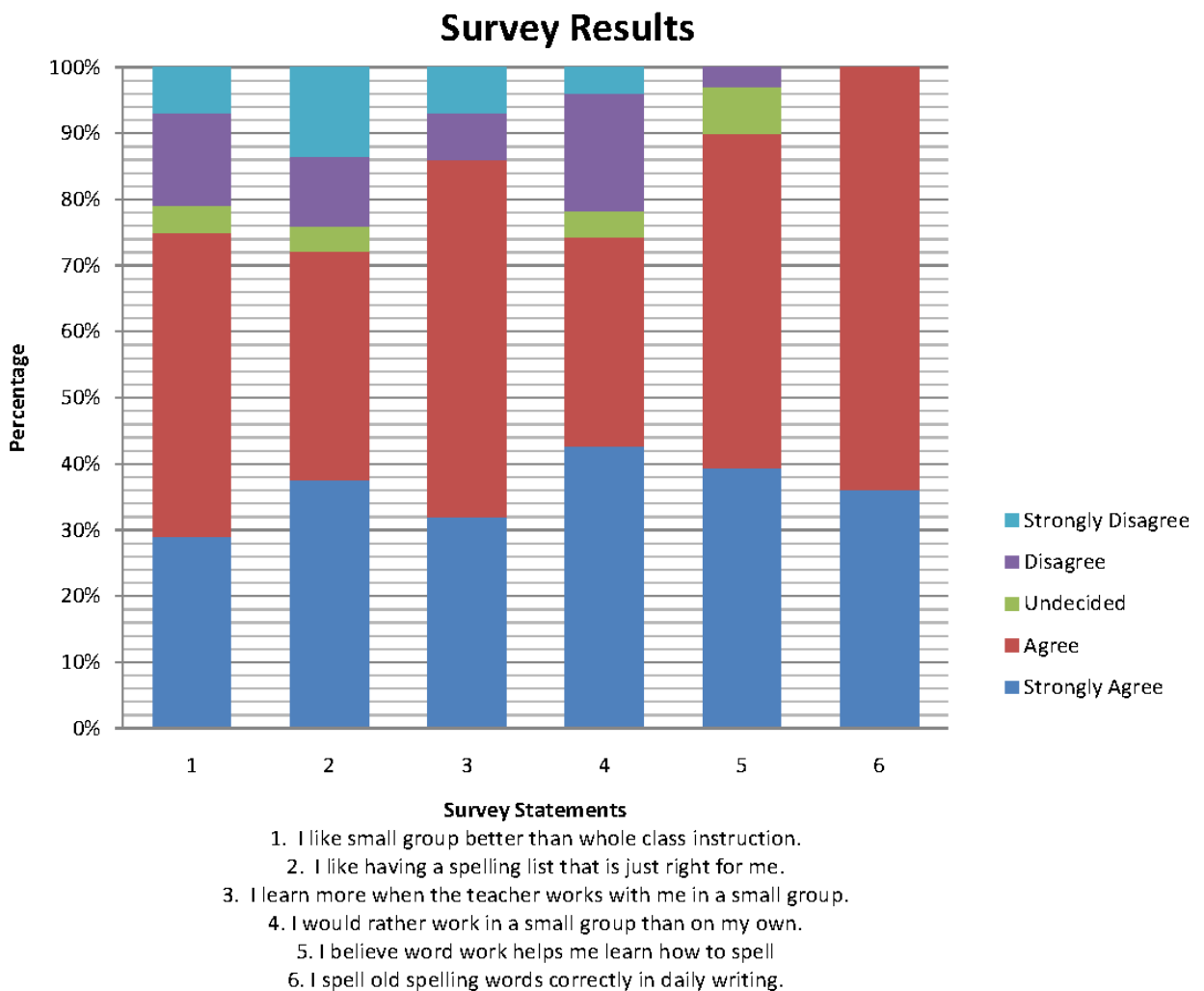
Data Source 3- Anecdotal Notes

  Anecdotal notes were taken to provide detailed, nonjudgmental facts of students' behaviors or comments. They are not meant to be used to assume or provide reasoning for students' actions. From the anecdotal records, it is evident students from Group A talked to each other during word work; however, their conversations did not relate to the words. These students did demonstrate proper listening behaviors with the teacher when she explained the word sorts by looking at her. If the teacher told the students they had a word in the wrong column, they would not move the word into the appropriate category. After telling the students the word was in the wrong place and the students did not move the word, the teacher tried to prompt them again by asking them to decide what column the word should be it. This behavior continued throughout the course of this project.

  Group B displayed similar behaviors. They barely communicated with each other and did not initiate sorting. When they did initiate, they looked at the letters, but not necessarily the pattern. For example, for the word *love*, the students placed this word under the long vowel pattern column because it had an e at the end, instead of realizing the word *love* does not actually fit the pattern. This group moved words into different categories, if necessary, without much prompting.   When the teacher was present, they looked and demonstrated proper listening skills.

  Students from Group C looked at the teacher during small group instruction and moved words around when necessary. They worked together, and agreed on how to sort words. One time they placed the word bear under the long vowel e column because it had two vowels next to each other. They did not realize the word did not actually have a long vowel sound even though there were two vowels there.

Students from Group D discussed the words together and were able to discover words that may not have fit any of the word patterns. Students in this group who were strong readers helped the students who could not decipher how to read a word. They demonstrated proper listening skills while their classmates and teacher talked by looking at them and changing words around as necessary.

Students from Groups E and F also worked with their classmates to determine placement of words. When they were unsure of a word, they communicated their reasoning. While the teacher discussed the words with the students, they nodded in acknowledgment. Students in this group did well on their spelling tests and transferred their successes in their daily writing.

Wrap-Up

From the checklists, Likert scales and anecdotal notes, data was collected to give reason to believe there are other factors involved when learning how to spell besides the approach to spelling: traditional or word study. For example, the checklists provided information to suggest students who were distracted by other activities going on in the classroom have difficulty holding attention to the task at hand-word study. Also, it was interesting to see a trend with students who have the skills and knowledge base to work with and discuss word patterns with classmates. Students who worked with their peers, demonstrated better listening skills and had more word knowledge. Considering one hundred percent of students either agreed or strongly agreed to the statement: I spell old spelling words correctly in daily writing, students at least confident their spelling skills in daily writing has improved. Although the question from the Likert scale asked this, the following question will provide more evidence as to whether this was in fact the case or not.

Research Question 3- How will implementing a word study program improve spelling in daily writing?

**Data Source 1- Writing Artifacts**

By looking at the writing artifacts, it can be determined if students remembered to spell old spelling words correctly in daily writing. To assess all writing artifacts consistently, a rubric was used. This can be found in Appendix G. The criteria for the rubric were: spells old assigned words correctly, spells common sight words correctly, and uses phonemic skills and word patterns to spell words. Students' writing samples were assessed and marked for each category as: most of the time, some of the time or never.

After assessing twenty-eight writing samples, sixty-one percent of students spelled old assigned words correctly most of the time. Twenty-one students spelled assigned words correctly some of the time and eighteen percent of students never spelled old assigned words correctly. All five students who were scored as never spelling old spelling words correctly were from Groups A and B.

The next area on the rubric was: spells common sight words correctly. Seventy-one percent of students' writing samples demonstrated they spell common sight words correctly most of the time. Twenty-nine percent of students demonstrated spelling common sight words correctly some of the time. Zero percent of students never misspelled common sight words.

The third area assessed on the rubric was: uses phonetic skills and word patterns to spell words. Because students do not commonly use some of their previous spelling words in their daily writing, this criterion will explain whether students retain the spelling pattern learned, not necessarily the actual spelling word. For example, if a student had the spelling word *boat*, they were expected to learn the spelling pattern of the long o sound with two vowels next to each

other. This way, the student would not necessarily have to have the word *boat* in their daily

writing, but could have goat, foam, road, etc. Sixty-one percent of students used phonemic skills

and word patterns to spell words most of the time. Thirty-nine percent used phonemic skills and

word patterns to spell words some of the time. Zero percent of students never use phonemic

skills and word patterns.
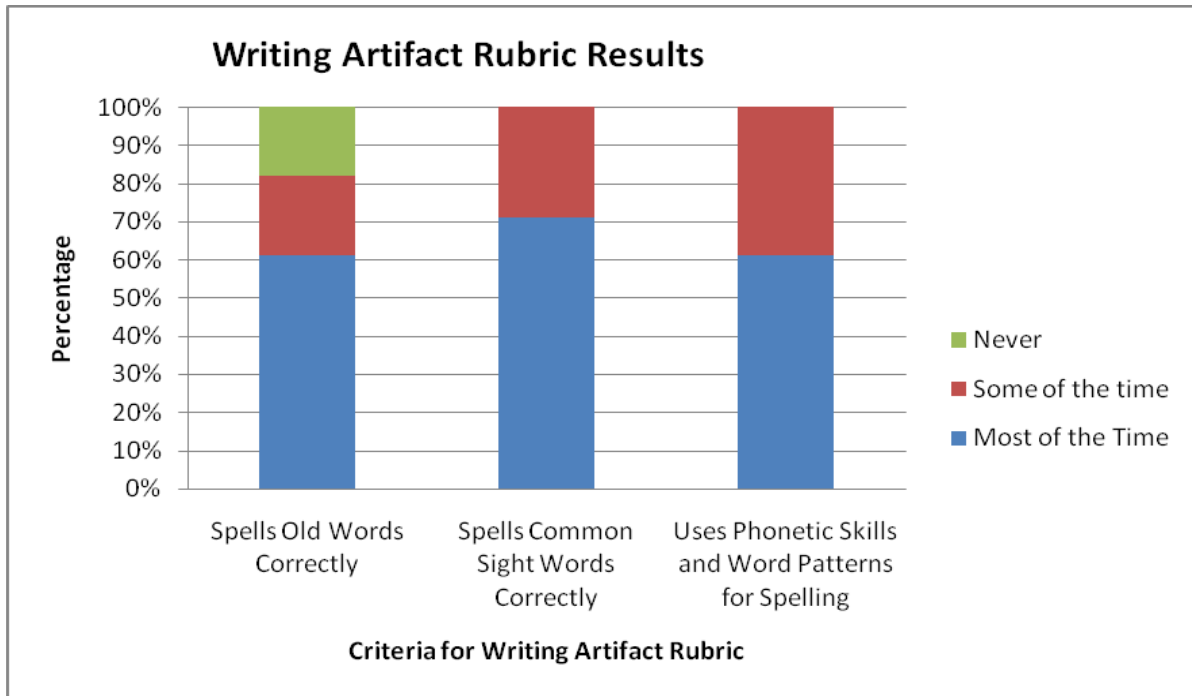
Data Source 2- Teacher/Student Interviews

From the teacher/student interviews (Appendix H), students answered questions about

how learning spelling through word study has helped them improve as spellers. The first

questions asked were: Are you a good speller? Why or why not? All students believed they

were good spellers, with the exception of one student who replied he was unsure. This student

was from Group D and did show growth from the pre and post spelling inventories.

The second questions from the interview were: Do you enjoy word study? Why or why

not? All students from Groups A, B, C, E and F replied that they did enjoy it and it helped them

to learn how to spell. Four of the sixteen students from Group D replied they did not like word

study. Their reasoning was because it was "boring" or "too much."

The next questions asked from the interview were: Are you learning how to spell better

through Words Their Way? Why or why not? All students answered they are learning how to

spell better through the word study program than they did with the traditional spelling program,

except one student. This student is one of the four students who went down in their

developmental spelling stage from the pre and post spelling inventories.

The next question asked was: How do you do on your spelling tests? Most students

replied they do "good" and get most words correct. The same student who replied "no" to the

question "Are you learning how to spell better through Words Their Way?" was the only student

who said she sometimes does good.

The last question on the teacher/student interview was: When you writing, do you

remember to spell old spelling words correctly? All students from Groups A, B and E replied

"yes." One student from Group C said he sometimes does, and the other student from Group C

said "yes." Answers from Group D were "yes," "sometimes," "usually," or "mostly." Two

students from Group F answered "sometimes" and on replied "yes."

Data Source 3- Teacher Journal

A teacher journal (Appendix I) was kept to jot down observations, note progress and to

help guide future instruction with the students. Reflecting upon the journal, it seems Group A

initially had overall difficulty sorting the words. They did not seem confident in how to sort the

words and also did not work together. The objective to sorting is to have the students experiment

with the words and sort them how they see fit. There is not just one way to sort the words given

to them and the students were supposed to use their own judgment. Students from Group A did

not work together; rather they sat by each other and talk off topic. They did not show knowledge

of how to discuss the words. Students from Group A would guess at how to sort. Noting this in

the journal at the beginning of the data collection process caused the teacher to meet with this

group first to eliminate misconceptions and guide them in the right direction. Observations

noted in the journal indicate students from Group A started sorting the words by vowels, whether

it was a short vowel or long vowel. For example, for the word *same*, they sorted it as having a

consonant-vowel-consonant pattern, which would be a short vowel sound, rather than

considering the e at the end of the word same changing the sound of the first vowel. This

observations leads to the conclusion the students were not sorting by the sound, but by the actual

letter. The reason for this could be that both students from Group A received speech services.

Also, both these students are below grade level in reading and writing and have possible learning

disabilities.

From the journal entries regarding students from Group B, one of the three students did

not initiate sorting. She would wait until the other students in her group sorted and then copied

how they sorted their words without communicating or working with them. This student

appeared to be uncomfortable with experimenting with new words. Initially, she did not seem

confident in sorting and would guess how to sort. Eventually, she became more knowledgeable

about word features and took initiative. She did not appear to work with her classmates,

however. Another student from Group B was a student who received speech services and

academic support. At the beginning of this data collection process, this student never retained

spelling features learned or old spelling words. She was a struggling reader and did not show

much understanding of the relationship between sounds and letters in her daily writing,

especially with vowels. She began to show growth when she was given the opportunity to work

with her peers on her words. It was noted in the journal that she began to show growth about

five weeks into the action research process. She was acknowledging initial and final consonants

and improved her vowel sounds. Her confidence also improved and she began to experiment

with different vowel patterns. For example, at the beginning of this project, she would have

spelled the word fight, f-i-t, but at the end of this process spelled it f-i-t-e, indicating she was

aware a long vowel sound was sometimes represented with an e at the end. The third student

from this group was a stronger reader than the other two students in this group. She was below

grade level at the beginning of the year, but caught up. She lacked motivation with spelling and

did not seem interested. Over time she did begin to demonstrate knowledge of word patterns by

experimenting with her spelling more throughout the course of this project.

Both students from Group C were below grade level readers and writers when this

process started. Their writing did not give evidence of knowledge of long vowel patterns. As

they learned long vowel patterns, they would often forget which words followed which pattern.

Errors on their spelling tests would be because of confusion with spelling patterns. One of the

students indicated he liked word study, the other did not. The student who did not like word

study had little confidence in himself at the beginning of this project. At the end of this project,

this same student explained he thought he was a good speller. The student who did like word

study seemed to do better on his spelling tests than the other student.

Seven of the students from Group D are grade level readers. These students demonstrate

knowledge of spelling features; however, not consistently. These students work well with their

peers during word study time and appear comfortable playing with words. These students

showed growth in their spelling achievement throughout this study and also demonstrated

positive attitude towards word study. They were eager to get their new words and learn new

spelling patterns. Nine of the students for Group D are above grade level readers. They

consistently demonstrate knowledge of spelling features and almost always recall old spelling

words and patterns. One student from this group stated he had a good memory and was able to

picture the spellings in his head.

Students from Groups E and F were advanced in their spelling skills for first grade level.

They did not show any signs of struggle to remember word spellings and patterns. Most students

from both of these groups would rarely get any words wrong on their spelling tests and usually

always spelled words correctly in their daily writing.

Wrap-Up

Writing artifacts, teacher/student interviews and a teacher journal were used to determine

how word study would improve spelling retention in daily writing. The writing artifacts were

assessed by using a rubric. Students spell common sight words correctly more often than

previous spelling words. This is not alarming because students see sight words more often while

reading texts than they may see their own previous spelling words. Most students believed they

had become better spellers since word study was implemented. The writing artifacts collected

showed students used spelling patterns learn, however, it would have been beneficial to compare

a writing sample using the rubric before and after the implementation of a word study program.

Action Plan

After implementing a word study program, differentiating spelling instruction, working in

small groups and collecting data, overall, I am pleased with the results. Unfortunately, it appears

my lowest students did not benefit much from word study, but other factors could be involved.

For the most part students enjoyed word study and being given the opportunity to work with their

peers. The team building and collaboration helped students become successful. They clearly

benefited from working with their peers and from having words which were at their

developmental level. It also encourages me that the students believed they became better

spellers because of the program. As a result of this action research project, I plan to make some

changes when I implement this program again. For one thing, I need to spend more time with

students at the lower developmental spelling stages. I also need to do a better job explaining my

expectations for students when they are to work with each other and sort their words. I need to

clarify that sorting does not have to be right or wrong, but they need to justify why and how they

did decide to sort their words.

        My principal has asked me to share my action research findings and how implementing

Words Their Way works with my staff at a professional development workshop. I will explain

the importance of stating expectations explicitly before beginning the program and to also model

different ways to sort in front of students. This action research project showed me the

importance of collecting and documenting data when starting something new. When I first

began the data collection process, I thought students were not showing any growth and I was

getting down on myself. Then, when I looked at the data, I realized my students were actually

doing quite well. I think analyzing the data is an important part of the process and has changed

how I view my professional practice.

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Appendices

Appendix A:

Research Questions	Data Source		
	1	**2**	**3**
1. How will teaching spelling using a word study approach improve retention of spelling patterns?	Spelling Pre Test	Spelling Post Test	Teacher Made Tests
2. What are the effects of teaching spelling in differentiated small group instruction?	Checklists	Likert Scale	Anecdotal Notes
3. How will implementing a word study program improve spelling in daily writing?	Writing Artifacts	Teacher/Student Interviews	Teacher Journal

One of my research questions is: How will teaching spelling using a word study approach

improve retention of spelling patterns? To answer this question, I used the following data

collection techniques: pre and post spelling inventories and teacher made tests. All three of these

data collection techniques are qualitative. The pre test indicate the spelling patterns students had

mastered and informed me of the instructional spelling stage they were in at that time. Then I

was able to place my students in appropriate spelling groups. The pre and post tests included the

same words with spelling features to be taught throughout the implementation of *Words Their*

Way (Bear et. al., 2008). I compared the results of the before and after inventories to determine

whether the patterns taught were retained, therefore, answering my research question. The

teacher made tests were weekly spelling tests. Dorothy Korzym stated, "when you analyze your

data, you need to summarize it, you need to reflect upon it, you need to write out what you

found" (2007). The teacher made tests informed me if my students learned the patterns long

enough to pass the spelling test. If they were able to spell these words correctly, the post

inventory informed me if they learned the spelling patterns and could apply them into their daily

writing.

My second research question is: What are the effects of teaching spelling in differentiated

small group instruction? To answer this question, I used the following data collection

techniques: checklists, likert scale and anecdotal observations. These three data collection

techniques are qualitative. While teaching in small groups, I observed students working and

recorded on a checklist if students were engaged or not. This helped me to answer my research

question and know if teaching in small group improves attention of students and therefore,

improves their learning of spelling material. The likert scale asked them if they agreed or

disagreed with comments regarding spelling instruction. It will provide information on how they

prefer to learn spelling: small group or the traditional spelling implemented prior. I asked

students if they believed they learn better with a smaller group or as the whole class. Lastly,

anecdotal records are kept to make observations, summaries, "of what the students had to say"

(Mills, 2011, p. 79), and comments to be looked at another time.

My third research question is: How will implementing a word study program improve

spelling in daily writing? The data collection techniques that I used to answer this question are:

artifacts, such as writing samples with a rubric indicating how often students are spelling words

correctly in their daily writing, teacher/student interviews and a teacher journal. The rubric for

daily writing was a quantitative tool and was assessed by using a three point rating scale. It is a

valid tool to use to answer this research question because it directly measures what the question

asks authentically. Interviews between the teacher and student are qualitative data sources.

Interviews with students would include questions that, "vary from convergent to divergent,"

meaning they are both open-ended and closed questions (Mills, 2011, p. 79). Students were

asked how they were performing, how their spelling skills have improved and if their confident

in spelling previous spelling words correctly. A teacher journal is also a qualitative data

collection technique. It includes biased free comments of students' growth and progress,

reflections made of small group lessons, comments students made and specific suggestions for

future lessons.

Appendix B: Pre and Post Test

Feature Guide for Primary Spelling Inventory

302

Directions: Check the features that are present in each student's spelling. In the bottom row, total features used correctly. Check the spelling stage that summarizes the student's development. Begin instruction at that stage with a focus on the types of features where the student missed two or more features in a column.

Student's Name _____ Teacher _____ Grade _____ Date _____

SPELLING STAGES →	EMERGENT		LETTER NAME–ALPHABETIC			WITHIN WORD PATTERN			SYLLABLES & AFFIXES	
	LATE	EARLY	MIDDLE		LATE	EARLY	MIDDLE		LATE	EARLY	MIDDLE
Features →	Beginning Consonants	Final Consonants	Short Vowels	Consonant Digraphs	Consonant Blends	Long Vowel Patterns	Other Vowel Patterns	Inflected Endings	Feature Points	Words Spelled Correctly
1. fan	f	n	a							
2. pet	p	t	e							
3. dig	d	g	i							
4. rob	r	b	o							
5. hope	h	p				o-e				
6. wait	w	t				ai				
7. gum	g	m	u							
8. sled			e		sl					
9. stick			i		st					
10. shine				sh		i-e				
11. dream					dr	ea				
12. blade					bl	a-e				
13. coach				ch		oa				
14. fright					fr	igh				
15. chewing				ch			ew	ing		
16. crawl					cr		aw			
17. wishes				sh				es		
18. thorn				th			or			
19. shouted				sh			ou	ed		
20. spoil					sp		oi			
21. growl							ow			
22. third				th			ir			
23. camped								ed		
24. tries								ies		
25. clapping								pping		
26. riding								ding		
Cells with 2 or more errors	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(56)	(26)

SPELLING STAGES:
❑ EARLY ❑ MIDDLE ❑ LATE
❑ LETTER NAME–ALPHABETIC
❑ WITHIN WORD PATTERN
❑ SYLLABLES & AFFIXES
❑ DERIVATIONAL RELATIONS

Words Spelled Correctly: /26
Feature Points: /56
Total /82

Words Their Way Appendix © 2004 by Prentice-Hall, Inc.

Appendix C: Teacher Made Tests- Weekly Spelling Tests

Spelling Bee
Do your best!

1. _____

2._____

3._____

4._____

5. _____

6. _____

7. _____

8. _____

9. _____

10._____

Appendix D: Checklist

Students Name: _____Date: _____ _____ Works with group to sort spelling words _____ Demonstrates proper listening skills during small group instruction _____ Fixes and makes changes to word sort if necessary _____ Volunteers to read off some words and what pattern they have	Students Name: _____Date: _____ _____ Works with group to sort spelling words _____ Demonstrates proper listening skills during small group instruction _____ Fixes and makes changes to word sort if necessary _____ Volunteers to read off some words and what pattern they have
Students Name: _____Date: _____ _____ Works with group to sort spelling words _____ Demonstrates proper listening skills during small group instruction _____ Fixes and makes changes to word sort if necessary _____ Volunteers to read off some words and what pattern they have	Students Name: _____Date: _____ _____ Works with group to sort spelling words _____ Demonstrates proper listening skills during small group instruction _____ Fixes and makes changes to word sort if necessary _____ Volunteers to read off some words and what pattern they have
Students Name: _____Date: _____ _____ Works with group to sort spelling words _____ Demonstrates proper listening skills during small group instruction _____ Fixes and makes changes to word sort if necessary _____ Volunteers to read off some words and what pattern they have	Students Name: _____Date: _____ _____ Works with group to sort spelling words _____ Demonstrates proper listening skills during small group instruction _____ Fixes and makes changes to word sort if necessary _____ Volunteers to read off some words and what pattern they have

Appendix E: Student Survey

SA-Strongly Agree,   A-agree, U-undecided, SD-Strongly Disagree, D-disagree

1. I like small group better than whole class instruction for spelling.

SA   A   U   SD   D

2. I like having a spelling list that is just right for me rather than everyone in the class having the same spelling list.

SA   A   U   SD   D

3. I learn more when the teacher works with me in a group than I did with our previous spelling program.

SA   A   U   SD   D

4. I would rather work in small group than on my own.

SA   A   U   SD   D

5. I believe word work helps me learn how to spell words correctly.

SA   A   U   SD   D

6. I spell old spelling words correctly in daily writing.

SA   A   U   SD   D

Appendix F: Anecdotal Record Form

Name: _____

Date: _____

Comments:

_____

_____

_____

_____

Name: _____

Date: _____

Comments:

_____

_____

_____

_____

Name: _____

Date: _____

Comments:

_____

_____

_____

_____

Appendix G: Writing Artifact Rubric

Name: _____   Date: _____   Sample of: _____

Criteria	3	2	1
Spells old assigned words correctly	Most of the time	Some of the time	Never
Spells common sight words correctly	Most of the time	Some of the time	Never
Uses phonemic skills and word patterns to spell words	Most of the time	Some of the time	Never

Appendix H: Teacher Student Interview

Name: _____   Date: _____

1. Are you a good speller? _____ Why/why not? _____

_____

_____

2. Do you enjoy word study?_____ Why/why not? _____

_____

_____

3. Are you learning how to spell better through Words Their Way? _____

_____

_____

4. How do you do on your spelling tests? _____

_____

5. When you are writing, do you remember to spell old spelling words correctly? _____

_____

_____

Appendix I: Teacher Journal

Date: _____

Reflections:_____

_____

_____

_____

Date: _____

Reflections:_____

_____

_____

_____

Date: _____

Reflections:_____

_____

_____

_____