

**SPELLING PROGRAMS: BASAL SPELLING, *STORYTOWN*, AS COMPARED
TO DEVELOPMENTAL SPELLING, *WORDS THEIR WAY***

by

Beth A. Jauhola

December, 2013

A Thesis Proposal Presented in Partial Fulfillment

Of the Requirements for a

Masters of Science in Education - Reading

University of Wisconsin-Superior

SPELLING PROGRAMS: BASAL SPELLING, *STORYTOWN*, AS COMPARED TO
DEVELOPMENTAL SPELLING, *WORDS THEIR WAY*

By

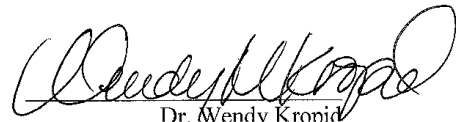
Beth A. Jauhola

A Thesis Proposal Presented in Partial Fulfillment

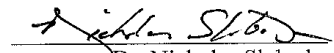
Of the Requirements for a

Masters of Science Education - Reading


University of Wisconsin-Superior



Dr. Wendy Kropid
Advisor



Dr. Nicholas Sloboda
Program Department Chair



Ms. Elizabeth Blue
Dean, Graduate Studies

University of Wisconsin-Superior

Acknowledgments

With heartfelt thanks, I acknowledge the many people who helped me through the process of completing my thesis. First and foremost, I want to thank my family, Derek, Kailyn, and Carter, whom I am forever thankful for. I often spent much precious family time working on my thesis. They witnessed all of my celebrations, frustrations, and late-night typing, and they were always very understanding and supportive through it all. I love you all to the moon and back!

I would also like to thank my mom, Carol Ward, and dad, Mick Ward, for their deep-wisdom, support, never-ending love, and unending pride for me. Thank you for always being there for me – to both of you I am eternally grateful and I love you!

I would also like to thank all of the professors I had through my graduate studies at the University of Wisconsin-Superior, especially Dr. Deborah Harrison and Ms. Becky Ardren. I have learned so much and, thanks to *all* of you, I am overly prepared and ready for this new adventure. I would like to extend a special thank you to my advisor and professor, Dr. Wendy Kropid, who goes above and beyond to help her students. Her support through my graduate studies and this thesis process will not be forgotten.

TABLE OF CONTENTS

CHAPTER 1. INTRODUCTION.....	1
Statement of the Problem.....	2
Purpose of the Study.....	2
Hypothesis.....	3
Nature of the Study.....	3
Significance of the Study.....	4
Definition of Terms.....	4
Assumptions, Limitations, and Delimitations.....	5
Conclusion.....	6
CHAPTER 2. LITERATURE REVIEW.....	7
Introduction.....	7
History of Spelling Research and Instruction.....	8
Basal Spelling Program.....	11
Developmental Spelling Program.....	15
Summary of the Literature Review.....	23
CHAPTER 3. METHODOLOGY.....	24
Introduction.....	24
Design.....	24
Participants.....	25
Instrumentation.....	26
Procedure.....	27
Data Analysis.....	29

Conclusion.....	30
CHAPTER 4. DATA COLLECTION AND ANALYSIS.....	31
Introduction.....	31
Findings.....	31
StoryTown Data.....	32
Words Their Way Data.....	35
Data Comparing StoryTown and Words Their Way.....	38
Conclusion.....	40
CHAPTER 5. RESULTS, CONCLUSIONS, AND RECOMMENDATIONS.....	41
Introduction.....	41
Results Analysis.....	41
Conclusions.....	42
Recommendations for Future Research.....	43
Conclusion.....	43
REFERENCES.....	45
APPENDIX A. DEVELOPMENTAL SPELLING ANALYSIS (DSA).....	48
APPENDIX B. <i>AIMSWEB</i> CURRICULUM BASED MEASURE (CBM).....	51
APPENDIX C. BASAL SPELLING WORD LISTS FOR <i>STORYTOWN</i>	54

CHAPTER 1. INTRODUCTION

The most effective instructional method to teach spelling has been up for debate for many years. One common instructional method teachers utilize is a ready-to-go basal spelling program, while other teachers take a more developmental approach to their spelling instruction by using a program such as *Words Their Way*. As Wallace (2006) stated, the basal program includes direct instruction, spelling rules, study techniques, and weekly tests, while the developmental program is aligned with Piaget's cognitive developmental theory and includes lists that are more personal to each student's spelling level.

Several other instructional methods and variations of methods are used by teachers; however, the proposed study focused on the basal program, *StoryTown* (Beck et al., 2009), and the developmental method, *Words Their Way* (Bear, D.R., Invernizzi, M., Templeton, S., & Johnston, F., 2012). The proposed study determined which of those two spelling programs were aligned with the most growth for a class of first grade students in a northern Minnesota elementary school. Researchers have worked to determine which program is the most effective, but there is still much debate over the findings. Spelling and reading are closely connected and come from the same cognitive foundation (Reed, 2012), and therefore, it is crucial, not only to spelling but also to reading development, that students receive the best spelling instruction possible. The proposed study compared previously collected data from a teacher who used two spelling programs in a first grade classroom to help gather more data, findings, and considerations for the debate.

Statement of the Problem

Because spelling is tied so closely to reading, it is crucial that students receive quality spelling instruction (Wallace, 2006). The proposed study investigated historical data to determine the effect on spelling progression of using a developmental spelling program, *Words Their Way*, as compared to using a basal spelling program, *StoryTown*, in one first grade classroom in northern Minnesota during the 2013 – 2014 school year. Available literature does not use aggregated data and spelling progression to compare *StoryTown* to *Words Their Way* in a northern Minnesota first grade classroom.

Purpose of the Study

The purpose of this study is to analyze historical data to determine whether using a basal spelling program, *StoryTown*, or a developmental program, *Words Their Way*, allowed for more spelling progression for first grade students in a classroom in northern Minnesota. This study attempted to contribute to the research that is currently available in the field of spelling instruction. It is important to determine which program offered the most growth for first grade students, as literature available does not compare *StoryTown* to *Words Their Way* in a first grade northern Minnesota classroom. By determining which program provided the greatest growth, teachers can implement that program into their spelling instruction to help students become efficient spellers. Because many teachers are currently using a basal program (Schlagal, 2002), this study may help to confirm that students show more spelling progress while using a basal, *StoryTown*, or it may help confirm that students show more spelling progress while using a developmental program, *Words Their Way*. Another purpose of this study was to share the findings with the

school district where this study was conducted. The district is currently reforming the reading program and was looking at the two programs analyzed during this study. The findings of this study will be used to make a more informed, research-based decision.

Hypothesis

The null hypothesis was that there was no difference in first grade students' spelling progression when the teacher instructed using a basal spelling program, *StoryTown*, and when the same teacher used a developmental program, *Words Their Way*, as measured by a qualitative spelling inventory and a curriculum based measure.

Nature of the Study

This particular study was a quantitative study. As Leedy and Ormond (2013) state, in quantitative research, the researcher tries to understand something through numbers. The proposed study did just that, as the pre- and post-tests gave a number score. Although the students were given a qualitative assessment as one means of measurement, the results were documented quantitatively by determining how far the students progressed through the spelling stages while using each strategy. As Leedy and Ormond (2013) state, a quantitative study identifies one to a few variables, and in the proposed study, those variables were the two different spelling programs. Furthermore, the proposed study was very structured within a relatively short time span, which Leedy and Ormond (2013) state is also common to a quantitative study. The study took place at a northern Minnesota elementary school in a first grade classroom. The implementation of a basal spelling series, *StoryTown*, was used for the first 22 school days of school, and

the teacher then switched to *Words Their Way*, a developmental program, for the next 22 school days. Because the teacher was trying to determine what would work best in her classroom, a pre- and post-test was administered to determine the students' growth during each 22 school day session. The average of all students' pre- and post-tests were looked at for this study.

Significance of the Study

The northern Minnesota elementary school used in the study is going through a complete change with a school improvement plan that the school and the Minnesota Department of Education recently created. During this change, the school looked at many new and innovative instructional programs and approaches for reading, spelling, and math. Developmental spelling is one of the instructional approaches the school looked at. The proposed study will help guide teachers and administrators into providing the students with the most effective spelling instruction.

Definition of Terms

Orthography/Orthographic Development. Orthography is the study of symbols in written language (Harris & Hodges, 1995). The development is the progression of those letters and sounds as they get more difficult for students.

Basal Spelling Program. Basal spelling programs are the programs provided in a reading series, such as *StoryTown*. All students in the classroom work on the same spelling words, and a test is given on Friday. Worksheets and making words activities using the spelling words are administered through the program. The program is set up in

a systematic way, beginning with short vowels and getting into more difficult skills as it goes (Beck et al., 2009).

Words Their Way. *Words Their Way* is a spelling program set up by Bear, Invernizzi, Templeton, & Johnston (2012) that uses word sorts, games, and more. Each individual student works on a set of words based on their developmental spelling level.

Word Sorts. Words on cards are grouped by students according to categories (Bear, Invernizzi, Templeton & Johnston, 2012).

Word Study. Students use hands on activities to study words based on phonics, spelling, and vocabulary (Bear, Invernizzi, Templeton & Johnston, 2012).

Assumptions, Limitations, and Delimitations

Many assumptions are in the current study. For example, it is assumed that the teacher followed each spelling program the way it is designed to be taught. Furthermore, it is assumed that the teacher was competent to teach spelling. It is also assumed that the students were capable of mastering the spelling terms. Finally, it is assumed that all tests were administered following the correct protocol and scored accurately. Student absence in class could be a limitation. For example, if a student is absent, particularly several days of absences, that student would be missing out on the spelling instruction which is what this study is determining the effectiveness of. Furthermore, several delimitations exist in this study. First, the historical data scores came from one venue – a northern Minnesota elementary school. Secondly, the historical data scores came from only one first grade classroom with 22 students and one teacher. The same results may not apply to another classroom, but I wasn't planning to be generalizable to all first graders – just to

capture what happened with mine. Finally, the historical data covered only a short period of time – the first 44 days of school. Students received instruction for 22 school days in each of the two strategies. This may not be enough time to truly see the benefits of each program. This study is intended to provide a snapshot in time; further studies could apply it to longer situations.

Conclusion

The current study focused on which spelling program resulted in greater student growth: a basal spelling program, *StoryTown*, or a developmental spelling program, *Words Their Way*. Historical data from pre- and post-tests were used to determine which pre- and post-test scores showed the greatest growth. The possible outcomes of this study will help support or deny the effectiveness of a basal program and/or a developmental program. Depending upon what the results show, teachers and administrators could use the data provided in this study to make a more informed decision as to which type of spelling instruction will most benefit the students.

CHAPTER 2. LITERATURE REVIEW

Spelling is crucial to the language arts classroom because it supports reading (Reed, 2012). Throughout history, teachers have struggled with determining the best way to teach spelling. As Schlagal (2002) explains, several teachers use a systematic approach, teaching specific spelling words and patterns in order with the entire class. Others have taken a more developmental approach, allowing students to work on spelling patterns at their individual spelling level (Schlagal, 2002). This developmental approach means that one classroom would likely have several different spelling patterns going at the same time. Schlagal goes on to explain that still others take an approach where a teacher only deals with spelling when spelling issues arise (Schlagal, 2002). Much conflict surrounds spelling instruction, and much research has been done to determine the most effective type of spelling instruction (Abbott, 2001; Burns & Boice, 2009; Maslin, 2003 and others). Because of the conflict surrounding spelling instruction, the proposed study will examine which spelling program results in the highest growth rate for first grade students at a northern Minnesota elementary school, a basal program called *StoryTown* or a developmental program called *Words Their Way*.

This literature review will be broken into three parts. The first area of the literature review will focus on the history of spelling research and instruction from the 19th century to the 21st century. The research analyzed provides a brief overview of where spelling instruction has been over the past few centuries. It is important to have this information to make a more informed decision on the most effective strategy for spelling instruction. The second area of the literature review will focus on spelling

instruction using a basal program. The research that will be analyzed will provide positive and negative aspects of using a basal program. Finally, the third area of the literature review will discuss research using a developmental program, such as *Words Their Way*. The third section will focus on the five stages of spelling development. It will also look at research on the qualitative spelling assessment and why spelling instruction is important. The analysis of all of the research will directly connect to the current study by indicating exactly what research has been completed and the results found. By beginning with the history of spelling, and then, looking at basal spelling programs and developmental spelling programs, this literature review will set the reader up for the proposed study of comparing a basal spelling program, *StoryTown*, to a developmental spelling program, *Words Their Way*.

History of Spelling Research and Instruction

Schlagal (2002) explained that the history of spelling is filled with conflict in determining the best way to teach spelling. Some researchers and teachers believe that spelling books are a great resource when used appropriately. Other researchers and teachers feel as though spelling is a developmental process, and it should be dealt with in that way – developmentally. Another view several researchers and teachers take is that spelling should be integrated into all subjects and only taught when students show some struggle (Schlagal, 2002).

Schlagal (2002) stated that, in the 19th century, spelling texts were the primary way that teachers taught spelling, and Webster’s “Blue-Backed Speller” was a common text. Teachers taught spelling, pronunciation, and grammar, and they also had passages

for moral and religious improvement within the spelling curriculum. It was not uncommon for a spelling list to contain fifty words, and if a child struggled, generally no efforts were made to adjust the difficulty (Schlagal, 2002).

Moving on to the 20th century, spelling books were no longer such a prominent part of language arts, but teachers continued to use spelling texts with many words in a non-orthographical order, such as the words listed in alphabetical order (Schlagal, 2002). Only a few texts tried to sort by difficulty, but difficulty was based solely on the number of syllables in a word (Schlagal, 2002). Schlagal (2002) also explained that intense research started in the 20th century. Curriculum Associates (n.d.) explained that in 1924, researchers found that giving students words in list form was most effective, and Schlagal (2002) stated that in the 1930s teachers used words that were found commonly in reading and writing to form their spelling lists, with the most common words being taught first. Curriculum Associates (n.d.) explained that a list of 5,507 highly useful words was established in 1954. Schlagal (2002) went on to explain that in the 1950s, researchers began looking at basal spellers because they were not organized by patterns at the time, and basal spellers began to change to a more orderly way of organizing words. Recently, some teachers have used their basal vocabulary words to teach spelling; however, this is not research based, the words are usually low frequency, and they do not go in an orthographical sequence (Schlagal, 2002).

Also, researchers began focusing on *how* students learn, rather than *what* words and *what* order, and they came up with a very logical progression that children go through, beginning with a very concrete sound-to-letter correlation all the way up to Latin and Greek roots (Schlagal, 2002). Some teachers continue to use that research to show

that spelling instruction is not necessary believing, instead, that students will learn to spell through reading and writing. However, experts say that spelling retention will not likely happen if spelling is not explicitly taught (Schlagal, 2002). As far as researching how students learn, Curriculum Associates (n.d.) explained that in 1959, researchers determined that games and puzzles were an effective piece of spelling instruction.

In recent years, many spelling strategies have been researched to determine the best instructional strategy for teaching spelling. For example, Burns and Boice (2009) investigated effects of instructional strategies on number of words retained and the relationship between IQ and words retained for each strategy. The study used 20 seventh and eighth graders diagnosed with a reading disability and a below average IQ. The students studied the words one-on-one with a researcher in a quiet area. Each week they studied the words using a different strategy. Retention of words learned using each strategy was checked throughout the study. The three strategies tested were (a) traditional drill (TD) – unknown words learned one by one in the same order until all were known three times, (b) interspersed– unknown words learned in groups of three, and (c) Incremental Rehearsal (IR) – one unknown word taught at a time and students verbally stated the word before getting the next word and the words continued to be presented, with the known words rechecked, until all words were known. The IR strategy led to two to three times more words retained than TD or interspersed (Burns & Boice, 2009). The proposed study will also compare spelling instruction strategies; however, the study will fill the gap by looking at different spelling programs.

In another study, using the IR strategy, similar to Burns and Boice's study, Garcia (2012) examined whether incremental rehearsal oral or incremental rehearsal written

helped students spell the most words correctly. Garcia (2012) completed the study in one first grade and five second grade classrooms in a private school. The results showed that students spelled words correctly in the incremental rehearsal written slightly more than in the incremental rehearsal oral. There was not a significant difference, but Garcia's study highlights the importance of writing (Garcia, 2012). More commonly used than the incremental rehearsal strategy for teaching spelling is for teachers to use a basal spelling program, which is what the proposed study will examine.

Basal Spelling Program

The basal spelling approach consists of having students learn spelling by progressively learning 3,000 words in second through eighth grade (Schlagal, 2002). Schlagal (2002) explained that each grade level has a certain list of word patterns that students are expected to learn. Many basal spelling programs come with many ready-to-use materials, such as spelling worksheets and some lessons (Schlagal, 2002).

Schlagal (2002) explained that many teachers have tried to teach using a developmental approach, but found it too difficult. Also, teachers are often worried that they are not doing an adequate job at teaching spelling by going away from the book. For that reason, teachers often rely upon the basal spelling program (Schlagal, 2002) because, in most cases, the basal provides teachers with the set-up and comfort that they are used to. Also, as stated by Curriculum Associates (n.d.), the basal spelling programs often claim to be research based, again providing teachers with that comfort; however, sometimes that means that just a piece of the program is research based, not necessarily the whole program. The proposed study will use a basal program to instruct a class of

first grade students and investigate the level of effectiveness of teaching using the basal spelling program, *StoryTown*.

Maslin (2003) examined several reading basal series and found that most of the series contained primarily standardized, fill-in-the-blank assessments. Maslin (2003) also concluded that most of the lessons in the basal series were geared toward whole-group instruction, and furthermore, the whole-group lessons continued at a steady pace and did not allow much time for differentiation. The researcher did find that the basal programs do allow for more time with phonics and spelling skills than books in the past had allowed for (Maslin, 2003). With that said, basal spelling programs vary widely with how much and what is offered. The proposed study looked at a basal program called *StoryTown*. *StoryTown* contains a small section of each chapter for spelling. It includes some word building, writing, and worksheets with the spelling words (Beck et al., 2009).

Schlagal (2002) explained that a basal spelling program gives teachers a resource that is ready to go and organized with progressive control of difficulty; however, according to Foorman and Petscher (2010) basal programs do not generally cover the depth of orthography that the English language has. With that said, Schlagal (2002) stated that if teachers take the time to organize students into groups based on their instructional level, a basal spelling program could be used effectively; however, many teachers using the basal spelling simply go through the book from the front to the back with the whole class. Foorman and Petscher (2010) stated that, during their study, they found that in the primary grades, spelling was rarely taught, and when it was taught, it was not taught effectively, as teachers would generally administer workbook pages for the students to complete with little to no instruction provided.

Johnston (2001) completed a study to determine what teachers' beliefs are when it comes to spelling instruction. Forty-two teachers (10 second grade, 11 third grade, 13 fourth grade and 8 fifth grade) were asked a series of open-ended questions. Teachers were asked about (a) instructional orders they have received, (b) if they use a basal spelling program and how much, (c) how they change instruction for students with different abilities, (d) opinions about students' spelling abilities now compared to the past, and (e) how they felt about their spelling instruction. All teachers in the sample used weekly spelling lists and tests (Johnston, 2001), as would be common with a basal spelling program.

Johnston (2001) stated that about half of the 42 teachers surveyed stated that they received no direction as to how to teach spelling, and also, about half of the teachers surveyed created their own list but used a basal to help. Most words chosen for the lists were more vocabulary than spelling focused. Ninety-three percent of the teachers surveyed used a formal spelling program and gave tests every Friday on words that were assigned (Johnston, 2001).

Johnson (2001) also found that of the 42 teachers, 12 used a published basal spelling program with created lists and worksheets. Nine of the teachers used a combination approach which used spelling generalizations and specific, assigned words. Twenty-one teachers used an alternative approach. In the alternative approach, the teachers let the students choose the words, chose the words based on themes, used high-frequency words, or used another way of choosing words. More importantly, most of the teachers did not seem to hold a developmental view of spelling. With that said, not many of the teachers were happy with how their students were spelling or with how they were

teaching spelling (Johnston, 2001). Because of the lack of guidance so many teachers felt as well as the several different strategies the teachers used, the proposed study may help give teachers guidance and direction by researching two common spelling instructional programs.

Johnston's study of looking at teachers' beliefs of the most effective spelling instruction leads into Kroenke's (2010) study which looked at the effects of word study spelling instruction on fourth grade word knowledge, comprehension, fluency, and spelling accuracy. Six out of twelve fourth grade classrooms were taught using the basal spelling program, while the other six were taught using *Words Their Way*, which is a developmental spelling program. The teachers were trained in the program they were teaching, whether it was the basal program or *Words Their Way*. The researcher tested four items including (a) word knowledge, (b) reading comprehension, (c) everyday spelling, and (d) oral reading fluency. Although the group using *Words Their Way* showed a higher achievement than the group using a basal spelling program on all of the tests, none of the tests, with the exception of everyday spelling, portrayed a statistically significant difference between the two groups (Kroenke, 2010).

Similar to Kroeke's study of looking at basal spelling as compared to *Words Their Way*, Joseph (2000) conducted a study with 42 first grade children from two different classrooms to determine whether a word sort group would show better results over a traditional classroom instruction group for word identification and spelling. Joseph (2000) found significant mean differences favoring word sorts in all areas. Joseph (2000) also found that the word sorts helped students recognize words, and word sorts are used to improve spelling performance and word recognition skills. The proposed study will

also use first grade students and will look at *Words Their Way* as compared to a basal spelling program; however, the current study will look at the programs as a whole, rather than just word sorts as in Joseph's (2000) study. Based upon the findings, it is possible that developmental spelling is another strategy that should be considered by teachers.

Developmental Spelling Program

Developmental spelling means that students should learn spelling in a systematic order, beginning with where they are in their development (Schlagal, 2002). A spelling process exists, and it is important to understand how students progress through a developmental spelling process, which includes patterns and features of words. Bear, Invernizzi, Templeton, and Johnston (2012) explained that if teachers work with students at their developmental level and then move them forward, students would better understand spelling.

Similar to Kroenke's and Joseph's studies, Abbott (2001) studied whether extended word study, compared to traditional spelling, led to visible differences, including transfer of the skills. Abbott (2001) conducted the study using 48 third graders from two classes. Each classroom received different instruction, and pre- and post-tests determined the results. In the room using the basal spelling program, the teacher completed daily activities such as (a) Monday: write spelling word in print and cursive, write the definition of five words, (b) Tuesday: write a sentence using spelling words, (c) Wednesday: put the spelling words in alphabetical order, (d) Thursday: check for understanding, quiz each other, and (e) Friday: spelling test (p 4). Abbott (2001) claimed that the class was quiet while it was time to work, and the teacher walked around the

room to provide feedback and support for the students.

Abbott (2001) found that while the teacher using *Words Their Way* provided an extended word-study session, a constant hum was heard throughout the room, and the hum was due primarily to academic discussions being held amongst the students. Abbott (2001) also indicated that the students were interactive as they discussed their words and new pattern discoveries.

Abbott (2001) explained that the results indicated a strong difference between word study and traditional spelling, as the third graders made more progress when they were taught at their individual orthographic development level. Also, Abbott (2001) showed that as far as transferring the knowledge to new words, the results showed a moderate effect, as the word study students performed more efficiently with low-frequency words during the middle twelve weeks. With that said, there was no significant effect with the high-frequency words during the first twelve weeks or with the low-frequency words during the last twelve weeks (Abbott, 2001). The proposed study is going to look at many of the same items as in Abbott's (2001) study, but the participants will be first graders rather than third graders.

As previously stated, much research has shown that spelling development follows a progressive development (Ness, 2010). For this study, Henderson's (1990) work on developmental spelling stages will be discussed. Henderson (1990) suggested that spelling follows these stages: (1) emergent, (2) letter-name, (3) within word pattern, (4) syllable juncture, and (5) derivational relations.

Emergent

This stage is generally found in grades Pre-K to the middle of first grade (Bear, et al., 2012). Ness (2010) explained that this stage takes place before students are reading. Students may scribble letters or write letters that do not correspond to the word that they are writing. Some may even write the correct initial or ending sound for a word (Ness, 2010).

Letter-Name

Words Their Way refers to this stage as the letter-name-alphabetic stage, and it is generally found in kindergarten through the middle of second grade (Bear, et al., 2012). During this stage, students write words with the correct letters for the sounds that they hear. During this stage, students may be reading, but their reading is generally very slow and choppy (Ness, 2010). In the beginning, the students write the correct beginning and ending sounds. When students enter the end of this stage, they can write appropriate short vowels, digraphs, and consonant blends, and they may even begin to use the silent -e (Ness, 2010).

Within Word Pattern

This stage is generally noticed in first grade to the middle of fourth grade (Bear, et al., 2012). As Ness (2010) explained, during this stage, students can write short vowels, and they begin to work with long vowels. Also, during this stage, students can read fluently. Students generally can use long vowel patterns, but they may still confuse them at times. In this stage, they come across diphthongs, ambiguous vowels, and r-controlled vowels. Students also begin working with three-letter blends and diphthongs (Ness, 2010).

Syllable Juncture

Words Their Way refers to this stage as the syllables and affixes stage, and it is generally seen in third grade through eighth grade (Bear, et al., 2012). Students in this stage generally read with fluency and expression (Ness, 2010). Ness (2010) explained that this is the stage where students begin to understand how spelling patterns change when syllables and affixes meet. Students in this stage work with open and closed syllables, double consonants, unstressed vowel sounds in final syllables, and prefixes and suffixes (Ness, 2010).

Derivational Relations

This stage is generally found in fifth through twelfth grade (Bear, et al., 2012). Ness (2010) stated that this is the stage where students begin to understand how to gain meaning through spelling. Students work with Greek and Latin roots, prefixes and suffixes (Ness, 2010).

Word Study and *Words Their Way*

Word study instruction, taught explicitly at each student's orthographic development level, helps students make connections between spelling and meaning (Bear, et al., 2012). Kroenke (2010) explained that students must enjoy learning about words by playing games and completing word sorts because as Bear, et al. (2012) claimed students do not gain word knowledge by memorization, but rather through a word study where they are able to play with the words.

Instruction with developmental spelling requires a qualitative review of students' spelling (Bear, et al., 2012). As Invernizzi and Hayes (2004) explained, analyzing spelling proves to be a valuable task to understanding a student's developmental stage.

Ness (2010) completed research and found that spelling inventories proved that students from one third grade classroom were at many different spelling developmental levels, and therefore, the same weekly spelling lists for an entire class do not provide the needed spelling instruction. The class had students who were just beginning to understand the alphabetic principle, while others were in the advanced derivational relations stage, and many students were also scattered all in between (Ness, 2010). Ness (2010) went on to explain that, by accurately determining a student's level, a teacher can better meet all students' individual needs. The proposed study will use a qualitative spelling inventory as one measurement for growth. The other measurement for growth will be a Curriculum Based Measure.

Just as Ness (2010) investigated a qualitative spelling inventory to see students' mistakes and spelling level, Arndt (2010) completed a study to determine what type of mistakes students made most often while spelling – phonological, orthographic, or morphological. Arndt (2010) used 100 randomly selected second graders from ten different classes in six different schools. For the measurement of the study, the researcher used a 25-word dictated spelling test. Arndt (2010) hypothesized that morphologically-based spelling patterns would be the most difficult for students. That hypothesis was supported. The study's findings showed that students did not make many phonological errors when compared to orthographic and morphological errors, and morphological errors proved to be the most difficult. Also, students' performance in the fall was very different; however, the rate of growth remained fairly equal amongst the students, which Arndt (2010) explained may be due to the failure to provide meaningful instruction at school. Furthermore, the researcher found that the literature base between

reading and spelling is connected (Arndt, 2010).

Just as Arndt (2010) found a connection between reading and spelling, Sharp, Sinatra, and Reynolds (2008) conducted a study that examined 31 students at-risk for failure in reading to determine what types of spelling strategies the students used. The students received four months of traditional spelling, and then, the researchers took their baseline scores. All teachers gave 20-minute daily lessons that included explicit teaching of spelling patterns. The students practiced their words using word sorts, games, and copying multiple times. The researchers found that students spelling development increased as they showed more understanding of orthographic knowledge through word study. For example, beginning spellers often used the reading strategy of guessing, but once they reached the early-within-word stage, guessing decreased significantly. Throughout all stages, students used sounding out as a strategy. Using reading rules was almost nonexistent in the early stages, but in the syllable juncture stage, using reading rules was common (Sharp, Sinatra, & Reynolds, 2008). Because of the strong link between reading and spelling progress, the proposed study on effective spelling programs is crucial to a balanced literacy program.

Do Spelling Instruction and Assessment Really Matter?

Why complete a study on spelling instruction with all of the spell checks, technology, and other tools available for students of the 21st century? Research review completed for this study proved how important spelling is. Foorman and Petscher (2010) completed a study with 875,040 students in grades 3 – 12 to determine if assessing spelling is useful for instruction. The measures the researchers used consisted of the FAIR (Florida Assessment for Instruction in Reading) which included a (a) reading

comprehension screen, (b) Maze Task, and (c) spelling task. Their research showed that students' spelling ability was 5 to 6 times more closely connected to which teacher they had, rather than what school they were in. This suggests that spelling instruction *is* important. On top of that, the study found that the elementary grades made the most growth, suggesting a lack of spelling instruction in the upper grades (Foorman & Petscher 2010). In the proposed study, spelling instruction is the key. The goal of the study is to determine the effectiveness of two different spelling programs.

From much of the past research, three main reasons pertaining to why spelling efficiency is important are highlighted here. To begin, Barger (2009) claimed that research shows that reading and spelling rely on the same fundamental knowledge. Also, there is a social stigma related to poor spelling. Reed (2012) explained that poor spelling is often viewed as laziness or lack of intelligence. Furthermore, Reed (2012) went through the Common Core State Standards and found which standards were linked to spelling. From kindergarten through grade 12, she found many standards or benchmarks that were related in some way to spelling (Reed, 2012). Because teachers are expected to cover all of those standards, it is crucial that teachers include some form of spelling instruction in their classroom. The proposed study will help determine which type of spelling program, a developmental program or a basal program, could be most beneficial to first grade students.

As for assessment, the previously explained study by Foorman and Petscher (2010) explained that assessing spelling in third through twelfth grade is useful. Student's spelling errors generally match up to the orthographical stages previously discussed. One way to determine where a student's spelling development is at is to

administer a qualitative spelling inventory. Even though a teacher can gain so much knowledge and insight from a spelling inventory, they are often not used. Barger (2009) suggested this could be because teachers are so used to using spelling from a basal, and they give the words on Monday with a test on Friday. Furthermore, Barger (2009) stated that parents are comfortable with the traditional way, and they may feel uncomfortable at first with an extensive spelling inventory; however, after having it explained, the parents could leave with a much clearer view of their child's strengths and weaknesses. Spelling qualitative inventories are a quick, simple, inexpensive, and reliable tool to find a student's ability in spelling (Barger, 2009). During the proposed study, students will be assessed with a qualitative spelling inventory and curriculum based spelling assessment both before and after the teacher instructs using the basal spelling program and the developmental spelling program. Similar assessments will also be interspersed through the spelling instruction as each program calls for.

Reed (2012) stated that spelling instruction can be very useful as long as it is taught in a very organized way to show students that there is a logical way to learn spelling – not memorization. This can be done through assessment, explicit instruction, careful selection of words, and repeated and cumulative practice (Reed, 2012). Spelling instruction and assessment are a crucial part to language arts, which is why the proposed study will compare two common spelling instructional programs, *StoryTown* and *Words Their Way*.

Summary of the Literature Review

The literature analyzed shows that much research centered around spelling over the past several centuries; however, much uncertainty and hesitation in moving forward with the research still exists because so many teachers are still so comfortable with the basal spelling program and the claims it provides. The first section of the literature review highlighted the history of spelling instruction and research. It is important to know where we are coming from to help determine where we would like to go. The history explained many of the different strategies that have been tried and how successful they were. The second section of the literature review focused on a basal spelling curriculum. It offered some pitfalls of the basal spelling program but also showed why it is the popular choice among many teachers still today. The third section of the literature review discussed developmental spelling. Included in the third section were also the program *Words Their Way*, spelling assessment, and why spelling is important. The three areas analyzed have set up the groundwork for the current study. The gap in the literature resides in obtaining a better understanding of how a developmental program, *Words Their Way*, and a basal spelling program, *StoryTown*, can affect the spelling progress of first grade students in a classroom at a northern Minnesota elementary school.

CHAPTER 3. METHODOLOGY

Spelling is closely connected to reading; and therefore, spelling instruction is crucial to the language arts (Reed, 2012). The proposed study will investigate historical data to determine the effect on spelling progression while using a developmental spelling program, *Words Their Way*, as compared to using a basal spelling program, *StoryTown*, in one first grade classroom in northern Minnesota during the 2013 – 2014 school year. The null hypothesis is that there was no difference in first grade students' spelling progression when the teacher instructed using a basal spelling program, *StoryTown*, and when the same teacher used a developmental program, *Words Their Way*, as measured by a qualitative spelling inventory and a curriculum based measure.

Design

The proposed study was conducted using a historical, quantitative, and quasi-experimental design. As Leedy and Ormond (2013) state, the researcher of a quasi-experimental design does not control all variables and the participants are not selected completely randomly. In the proposed study, the researcher only controlled the variables of the type of program used for spelling and the participants were selected because they were in the researcher's classroom, not randomly. Under the quasi-experimental design, the proposed study used the one group pretest-posttest design. Leedy and Ormond (2013) explain that the aim of that design is to show that a change occurs after treatment. The proposed study examined the historical data recorded after each of the two treatments,

basal spelling and developmental spelling.

Participants

Participants in this study included students in a first grade classroom at a northern Minnesota elementary school. This study used a historical sample of convenience sampling. Leedy and Ormond (2013) state that a convenience sampling is using people who are readily available. Data from the participants in the proposed study were readily available as they were in the researcher's classroom. Leedy and Ormond (2013) state that some research can use convenience sampling. For example, if the researcher owns a restaurant and testing his or her food he or she would use convenience sampling (Leedy & Ormond, 2013). Because the researcher of the proposed study teaches in the classroom that was used, the researcher used historical data from that classroom for convenience sampling. From September to November, 2013, the first grade classroom used historical data from a classroom with 22 students for the research. The students included seven girls and 15 boys.

In the school used in the study, students are expected to enter first grade at an independent guided reading level D. The reading levels of this group ranged from guided reading level A to guided reading level R at the beginning of the year. Four out of the 22 students entered first grade at a level D. Five came in at a level C and four came in at a level B. Two were at a level A, and two were at a Pre-A level. Three came in at a level F. One entered first grade at a level G and one at a level R. With that said, four of the students entered first grade at the expected grade level, D. Thirteen students entered first grade below the expected grade level D, and five entered first grade above the expected

grade level D. All students were included in both data sets.

Instrumentation

Pre- and post-test data was collected from the Developmental Spelling Analysis (DSA) (Ganske, 2000) (See Appendix A) and *Aimsweb's* Curriculum Based Measurement (CBM) for spelling (See Appendix B). The pre-test was collected from the beginning of each 22 school day session, and the post-test data was collected from the end of each 22 school day session. The data was input into a Microsoft Excel spreadsheet.

The DSA can be used to both determine a student's developmental level as well as show a student's strengths and weaknesses (Ganske, 1999). The test consists of 20 words with five words from each developmental spelling level. In the DSA, the teacher reads a word and uses the word in a sentence. The students write the word down to be graded by the teacher later (Ganske, 1999). Furthermore, Ganske (1999) explains two studies using DSA which determined that DSA is both a reliable and valid form of measurement for word knowledge. Teachers can easily and accurately use DSA (Ganske, 1999).

A CBM is an objective, ongoing, standardized assessment given with a two minute time limit. Every ten seconds, the teacher reads the next word. A student is expected to move on to the word the teacher reads even if that student has not finished the previous word. Again, the papers are collected by the teacher to be graded later (Hosp & Hosp, 2003). Hosp and Hosp (2003) state that a CBM is one of the most efficient measures for spelling growth. Pearson (n.d.) explains that *Aimsweb* has a spelling CBM for grade 1 through grade 8, which is independent of any curriculum, so any teacher can use it correctly and efficiently. The *Aimsweb* CBM consists of quality

graded word lists from the most frequently occurring words from seven spelling series and reading word lists (Pearson, n.d.).

Procedure

Seventy-three school days occur before the two week winter break at the school used in the study, and the study began 14 days after school started. That left sixty-nine days, and the teacher needed some extra days to ensure examination of data before choosing the most effective program when the students returned from winter break. Therefore, the study lasted 44 days. A consent form did not need be filled out by the participants' guardians because the study used historical data. Furthermore, the instructor simply investigated two different spelling programs – all students were treated the same.

The teacher in the proposed study used two different programs for spelling instruction. The data collection instruments, DSA and CBM, were given before any instruction was given. The scores were identified for pre-test data collection. The teacher administered the DSA and the CBM as the protocol stated on day one. The scores were averaged and put into the Microsoft Excel spreadsheet. The teacher then gave class instruction daily, for 22 days, using the basal program, *StoryTown*, exactly as it was set up in the basal (see spelling lists in Appendix C). The teacher followed all of the lessons, worksheets, and activities as seen in the basal protocol. The worksheets consisted of sentences with fill in the blank spelling words, copying spelling words, and matching spelling words. The activities each day included a “Building Words” activity, where the students received letter cards and were instructed what word to make. They often just needed to change one or two letters to make the next word. During the first 22 school

days, the teacher also sent home spelling lists (Appendix C) and other materials meant to go home as provided by the basal. After 22 school days of teaching using the basal spelling program, students were again given the DSA and CBM. This data was identified as post-test data collection. The second set of scores was also the scores used for the pre-test for the next 22 school day session. The scores were averaged and input into the Microsoft Excel spreadsheet.

The teacher then began teaching using a developmental spelling program called *Words Their Way*. The teacher grouped the students by developmental level (reflected from the DSA pre-test). After the teacher grouped the students, the teacher followed and used all of the applicable lessons, strategies, and games provided in the *Words Their Way* program for all students based on their spelling stage. Each day, the students had a different activity. On Monday, the students cut and sorted their words to find the pattern. On Tuesday, the students did a speed sort, where they sorted the words three times, each time trying to beat their time before. On Wednesday, they went on a word hunt, where they searched the room, books, etc. for words with the same pattern as their sort. On Thursday, they wrote their words in sentences, and on Friday, they sorted and glued their words and took a quick five word assessment to ensure they knew their pattern. During the 22 days of teaching using *Words Their Way*, the teacher sent home a new word sort each week and the same activities listed above for students to practice. After the 22 school day session was complete, the teacher administered the DSA and CBM. That data was averaged and input into the Microsoft Excel spreadsheet and identified as post-test data.

Data Analysis

The data for this study was collected through the Developmental Spelling Analysis (DSA) (Ganske, 1999) (See Appendix A) and *Aimsweb's* Curriculum Based Measurement (CBM) (See Appendix B). The data from these tests was treated as pre- and post-test data for each of the study treatments. The pre- and post-test data from each 22 school day session were averaged as a whole class and then input into a Microsoft Excel spreadsheet and compared to one another. The difference between the pre- and post-test averages for each phase of the study was also analyzed. The data were used to determine if there was more growth during the time the students were instructed using a basal spelling program, *StoryTown*, or a developmental spelling program, *Words Their Way*. With regard to student learning, *any* increase is valuable, and because of that, any growth that was shown was recognized; however, at least one point of growth was considered more meaningful than the growth of less than one point.

The data collected in this study tried to fill the gap of literature research, as there are few studies comparing a basal spelling program, *StoryTown*, to a developmental spelling program, *Words Their Way*, particularly in a first grade classroom in a northern Minnesota elementary school. Therefore, the data were also qualitatively compared to the findings of other studies to determine if this study supports other studies that have been completed regarding developmental and traditional spelling. For example, the data could be compared to Abbott's (2001) study comparing word study to traditional spelling to see if the results are consistent. The data and results were shared with teachers and administrators at the school in the study to inform them of the findings, so more informed decisions for spelling programs can be made.

Conclusion

In all, 22 first-grade students at a northern Minnesota elementary school were instructed using two different types of spelling programs: a basal spelling program, *StoryTown*, and a developmental spelling program, *Words Their Way*. Data was collected using the DSA and a CBM, and those scores were used as the pre- and post-test scores for this study and compared for growth. The following chapter will analyze those scores to determine which program allowed for the most growth.

CHAPTER 4. DATA COLLECTION AND ANALYSIS

Introduction

This chapter reports the results of the data analysis for this historical research study. The first set of data shown in this chapter was collected through pre- and post-tests, CBM and DSA, to determine the effectiveness of a basal spelling program, *StoryTown* (Beck et al., 2009). The second set of data in this chapter was collected through the same pre- and post-tests to determine the effectiveness of a developmental spelling program, *Words Their Way* (Bear, D.R., Invernizzi, M., Templeton, S., & Johnston, F., 2012). The third section of this chapter shows the difference in score improvements between the pre- and post-tests when using the two spelling instructional methods.

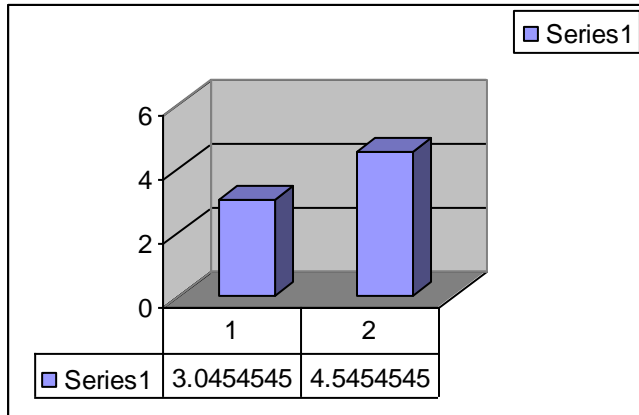
Findings

The following tables illustrate the students' scores on the DSA and the CBM assessments. The CBM had 56 possible points for correct letters spelled (CLS). The CBM also had 13 possible points for words spelled correctly. The DSA had a total of 20 possible points. The DSA also placed the students into a developmental stage based on their score. If the student scored 0 – 4 points, that student was placed in the first stage, letter-name. If the student scored 5 – 9 points, that student was placed in the next stage, with-in word. If the student scored between 10 and 14 points, the student was placed in the syllable juncture stage. Finally, if the student scored between 15 and 20 points, the student was placed in the top stage, derivational constancy. The scores are displayed in

an aggregated way.

StoryTown Data

Table 1: Pre and Post-Test Data for the number of words spelled correctly on the CBM before and after using the basal spelling instruction, StoryTown.



On the CBM pre-test for the *StoryTown* instruction, the students scored an average of 3.0454545 words spelled correctly. On the post-test, that score rose to 4.5454545 words spelled correctly. The students showed an average increase of 1.5 words spelled correctly after being instructed with the basal, *StoryTown*.

Table 2: Pre and Post-Test Data for correct letters spelled on the CBM using the basal spelling instruction, *StoryTown*.

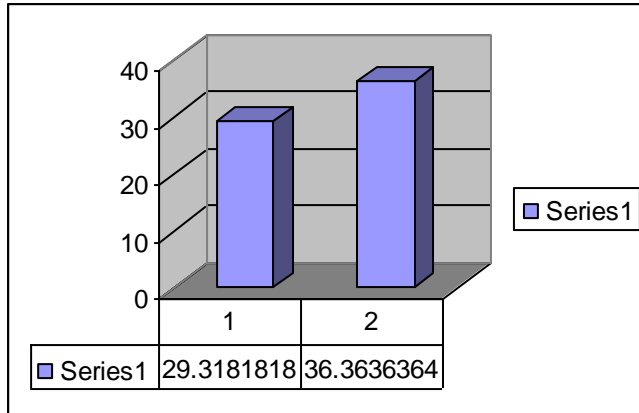


Table 2 shows the CBM pre-test and post-test for the *StoryTown* instruction, and on the pre-test, the students scored an average of 29.3181818 correct letters spelled. That score rose to an average of 36.3636364 correct letters spelled on the post-test. The students showed an average increase of 7.0454546 correct letters spelled after being instructed with the basal spelling program, *StoryTown*.

Table 3: Pre and Post-Test Data for words spelled correctly on the DSA using the basal spelling instruction, *StoryTown*.

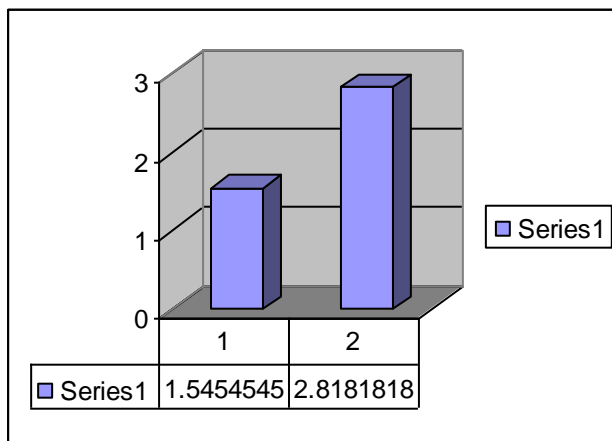


Table 3 shows the DSA pre-test and post-test for before and after the basal, *StoryTown*, instruction. On the pre-test, the students scored an average of 1.54545455 words spelled correctly. That score rose to an average of 2.8181818 on the post-test. That is an average increase of 1.27272725 words spelled correctly.

Table 4: Pre-Data (series 1) and Post-Data (series 2) for the number of students in each developmental spelling stage on the DSA before and after using the basal spelling instruction, StoryTown.

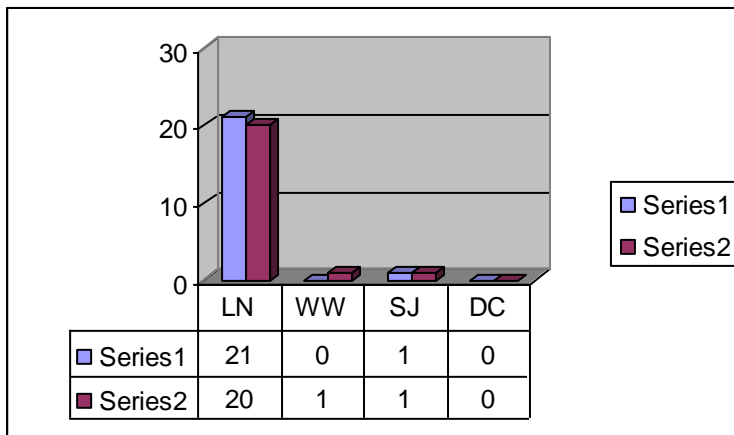
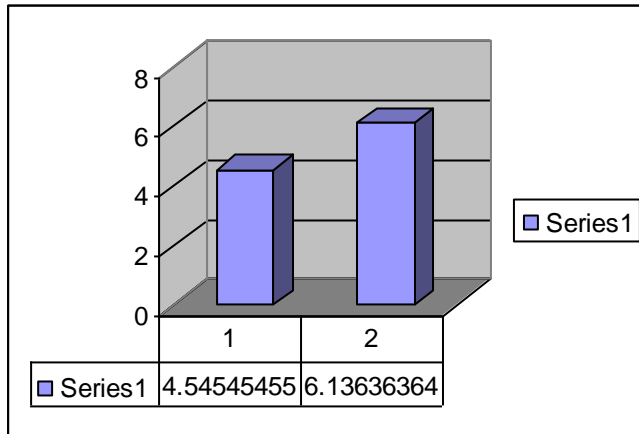


Table 4 shows the pre- and post-data for the number of students in each of the developmental spelling stages. As shown, 21 students began in the letter-name stage, and 20 students ended in the letter-name stage. One student moved from the letter-name stage to the with-in word stage. Also, one student began in the syllable-juncture stage, and one student ended in the syllable-juncture stage. No students started or moved to the derivational constancy stage. That data shows that one student moved up one level.

Words Their Way Data

Table 5: Pre and Post-Test Data for the number of words spelled correctly on the CBM before and after using the developmental spelling instruction, Words Their Way.



On the CBM pre-test for the *Words Their Way* instruction, the students scored an average of 4.54545455 words spelled correctly. On the post-test, that score rose to 6.13636364 words spelled correctly. The students showed an average increase of 1.59090909 words spelled correctly.

Table 6: Pre and Post-Test Data for correct letters spelled on the CBM before and after using the developmental spelling instruction, Words Their Way.

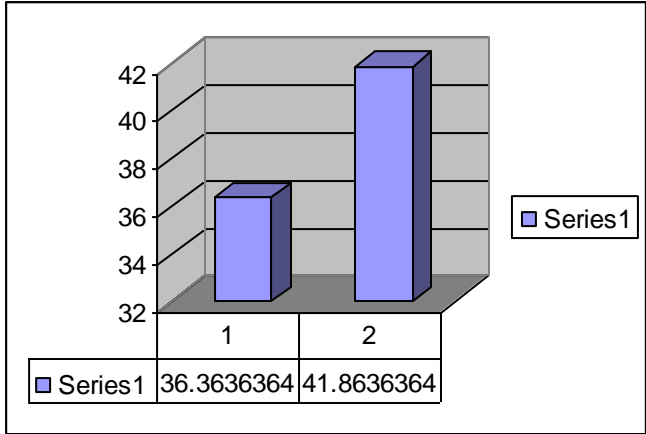


Table 6 shows the CBM pre-test and post-test for the *Words Their Way* instruction, and on the pre-test, the students scored an average of 36.3636364 correct letters spelled. That score rose to an average of 41.8636364 on the post-test. The students showed an average increase of 5.5 correct letters spelled.

Table 7: Pre and Post-Test Data for words spelled correctly on the DSA before and after using the developmental spelling instruction, Words Their Way.

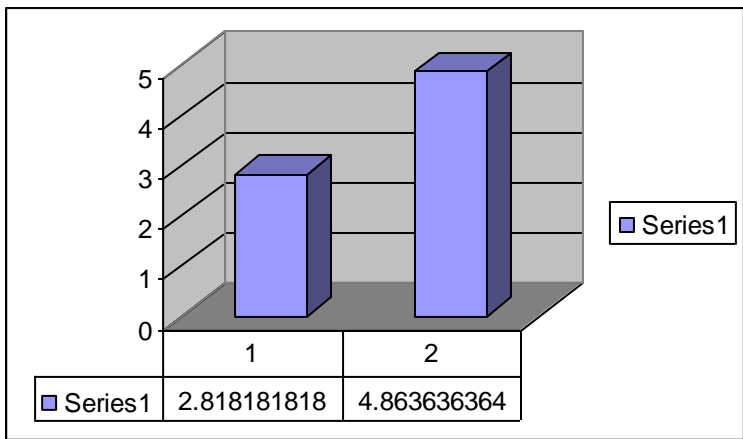


Table 7 shows the DSA pre-test and post-test for *Words Their Way* instruction. On the pre-test, the students scored an average of 2.8181818 words spelled correctly. That score rose to an average of 4.8636364 on the post-test. That is an average increase of

2.045454564 words spelled correctly.

Table 8: Pre-Data(series 1) and Post-Data (series 2) for the number of students in each of the developmental spelling stages on the DSA before and after using the developmental spelling instruction, *Words Their Way*.

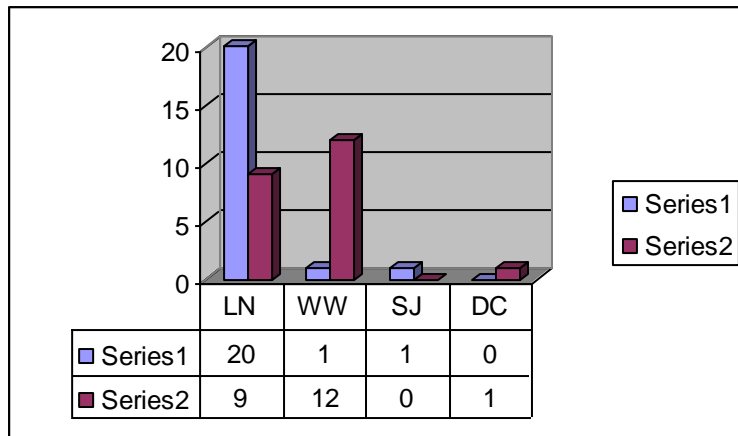
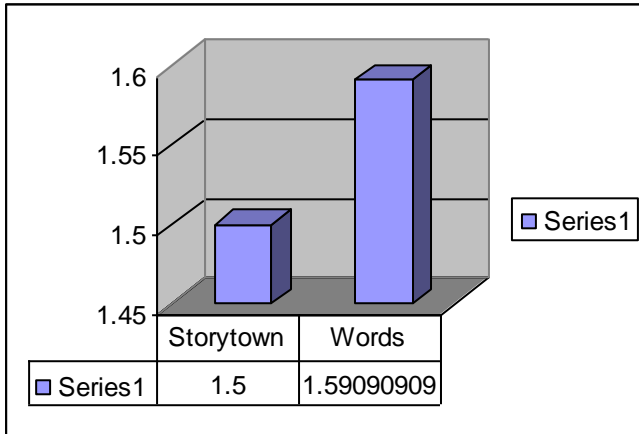


Table 8 shows the pre- and post-data for the number of students in each of the developmental spelling stages before and after using the developmental spelling program, *Words Their Way*. As shown, 20 students began in the letter-name stage, and nine students ended in the letter-name stage. Eleven students moved from the letter-name stage to the with-in word stage. Also, one student began in the syllable-juncture stage, and that student moved to the derivational constancy stage. The data shows that twelve out of twenty-two students moved up one level.

Data Comparing *StoryTown* and *Words Their Way*

*Table 9: CBM words spelled correctly when using *StoryTown* and *Words Their Way**



This table shows the difference in the average of words spelled correctly when using *StoryTown* and *Words Their Way*. The students showed more improvement after being instructed with *Words Their Way*. The students increased by .09090909 more words spelled correctly in the *Words Their Way* data.

*Table 10: CBM letters spelled correctly when using *StoryTown* and *Words Their Way*.*

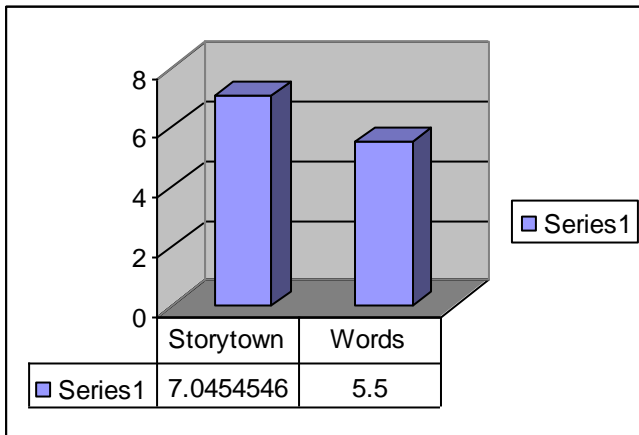
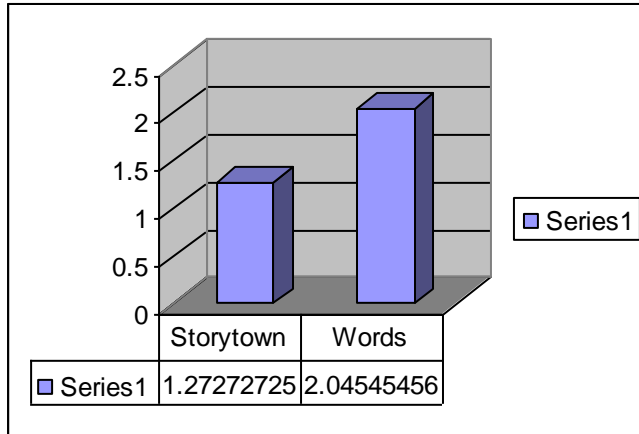


Table 10 shows the average increase of letters spelled correctly when using *StoryTown* and *Words Their Way*. As the table shows, *StoryTown* showed a larger increase

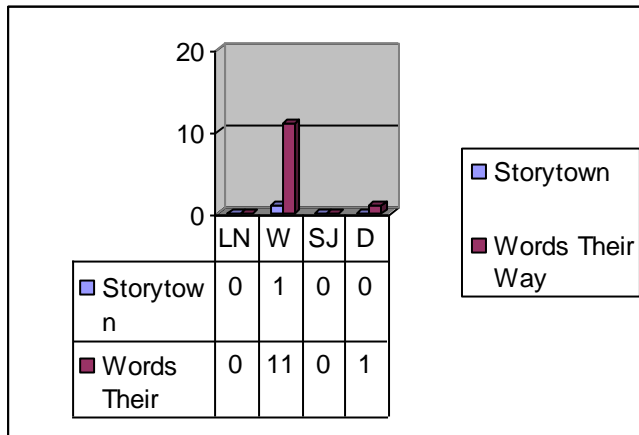
of letters spelled correctly by 1.5454546 letters.

Table 11: DSA words spelled correctly when using StoryTown and Words Their Way.



The table shows the average increase of words spelled correctly when using *StoryTown* and *Words Their Way*. As the table shows, *Words Their Way* showed a larger increase of words spelled correctly by 0.77272731 words.

Table 12: Developmental Stages increases while using StoryTown and Words Their Way.



This table shows how many students moved into each stage after instruction using *StoryTown* and *Words Their Way*. *Words Their Way* had ten more students move to the

with-in word stage and one more student move into the derivational stage. Overall, *Words Their Way* instruction had eleven students move up a stage, while the *StoryTown* instruction only had one student move up one stage.

Conclusion

In conclusion, students showed some growth after using both spelling instructional methods. During the *StoryTown* instruction, the students showed more growth on the CBM assessment by 1.5454546 letters spelled correctly, while during the *Words Their Way* instruction, students showed more growth on the CBM words spelled correctly by .09090909 words. On the DSA assessment *Words Their Way* showed a larger increase by 0.77272731 words, and *Words Their Way* also showed a much larger increase on the movement between stages for students, with eleven students moving up a stage, as compared to one student after *StoryTown* instruction.

CHAPTER 5. RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The purpose of this study was to determine whether a basal spelling program, *StoryTown*, or a developmental spelling program, *Words Their Way*, showed a higher success rate with a group of first grade students in a northern Minnesota elementary school. The study used historical data from a pre- and post-test to determine the effectiveness of each program. Furthermore, the study lasted 44 days, with 22 days (5 school weeks) dedicated to each spelling program.

Results Analysis

When evaluating the results of this study, it may be difficult to determine whether the basal spelling program, *StoryTown*, or the developmental spelling program, *Words Their Way*, is a more effective program. In each of the four areas of the assessments analyzed, there were differences in the average increases between using *StoryTown* and *Words Their Way*; however, most of the differences were not particularly large. For example, *StoryTown* instruction provided higher average increases for one of the four assessments, while *Words Their Way* instruction provided a greater increase for the other three data assessment results looked at.

The first assessment shown on the tables was the CBM. *StoryTown* showed a greater improvement on the CBM when looking at *letters* spelled correctly. The difference was not significant with 1.5454546 more letters spelled correctly. On the same CBM assessment, *Words Their Way* showed greater improvement when looking at *words*

spelled correctly. That difference was also not particularly large with .09090909 more words spelled correctly.

The other assessment given was the DSA. When looking at words spelled correctly on the DSA, *Words Their Way* showed a greater improvement with .77272731 more words spelled correctly. That difference was not particularly large; however, there was a large difference when looking at the movement between the spelling developmental stages. When looking at the DSA, *Words Their Way* had eleven students move up a stage, while *StoryTown* allowed for just one student to move up a stage.

Conclusions

Although there were not a lot of particularly large differences in the data between *StoryTown* and *Words Their Way*, some tentative conclusions can be drawn. With all of that data, it is obvious that, although any increase is valuable, the only pedagogically meaningful difference was shown in the movement of the students through the developmental spelling stages. The score of the top student's score did not change during the *StoryTown* instruction, but it changed dramatically during the *Words Their Way* instruction, and the student even jumped up a developmental spelling stage to the highest stage. With that information, a possible conclusion could be that a developmental program, *Words Their Way*, is more effective than a basal program, *StoryTown*, for higher achieving students.

Also, nine more students moved from the lowest level to the next level during *Words Their Way* than *StoryTown*. With that information, it can be concluded that students progress through the developmental stages more efficiently when using *Words*

Their Way, rather than *StoryTown*. This conclusion is supported by Abbott's (2001) study where Abbott found that there was a strong difference between word study (developmental spelling) and traditional spelling (basal spelling) because the students made much more progress when they were taught at their individual development level.

Recommendations for Future Research

There are several ways that future studies could be furthered using the results of this study. First, future studies should use a longer time frame. Because this study only lasted 22 days for each instructional method, it was difficult to see a significant difference in pre- and post-test scores. A longer time frame such as one-half of a year for each instructional method or a full year for each instructional method may supply the researcher with more data and, therefore, greater differences in the data.

Another suggestion would be for future studies to include more classrooms with a greater diversity of population. Data from first grade classrooms from around the country may supply the researcher with a greater wealth of data, and therefore, the researcher may be able to draw stronger conclusions from that data.

Conclusion

In conclusion, both instructional strategies showed student growth; however, the most meaningful growth came from the growth in the developmental spelling stage progression shown after using the *Words Their Way* instruction. This supports Joseph's (2000) study where the researcher found that word sort groups (developmental spelling) showed better results over traditional classroom instruction (basal spelling) for spelling.

Overall, the study provided for lots of suggestions for future studies, as well as some tentative conclusions.

REFERENCES

- Abbott, M. (2001). Effects of traditional versus extended word-study spelling instruction on students' orthographic knowledge. *Reading Online*, 5(3).
- Arndt, E.J. (2010). *Factors affecting the development of second grade spelling at the teacher, student, and word level* (unpublished doctoral dissertation). Florida State University, Tallahassee, FL.
- Barger, J. (2009). Using spelling inventories to inform instruction. *The NERA Journal*, 44(2) 51-53.
- Bear, D.R., Invernizzi, M., Templeton, S., & Johnston, F. (2012). *Words their way: Word study for phonics, vocabulary, and spelling instruction* (5th ed.). Upper Saddle River, NJ: Pearson Merrill Prentice Hall.
- Beck, I.L., Farr, R.C., Strickland, D.S., Ada, A.F., Hudson, R.F., McKeown, M.G.,..., Washington, J.A. (2009). *StoryTown*. Orlando, Florida: Hartcourt, Inc.
- Burns & Boice. (2009). Comparison of the relationship between words retained and intelligence for three instructional strategies among students with below-average IQ. *School Psychology Review*, 38(2) 284-292.
- Curriculum Associates. (n.d.). *Instant spelling words for writing*. Retrieved from <http://www.casamples.com/downloads/isww-research.pdf>
- Foorman, B.R. & Petscher, Y. (2010). Development of spelling and differential relations to text reading in grades 3-12. *Assessment for Effective Intervention*, 36(1) 7-20. doi 10.1177/1534508410379844
- Ganske, K.A. (1999). The developmental spelling analysis: A measure of orthographic knowledge. *Educational Assessment*, 6(1), 41-70.

- Garcia, D. (2012). *Examining the efficiency of incremental rehearsal oral and written procedures for spelling*. (Doctoral dissertation). Retrieved from https://etd.ohiolink.edu/ap:10:0::NO:10:P10_ACCESSION_NUM:osu133583275
- 9
- Harris, T. L. & Hodges, R. E. (1995). *The literacy dictionary, the vocabulary of reading and writing*. International Reading Association.
- Henderson, E.H. (1990). *Teaching Spelling*. Boston: Houghton Mifflin.
- Hosp, M.K. & Hosp, J.L. (2003). Curriculum-based measurement for reading, spelling, and math: How to do it and why. *Preventing School Failure, 48*(1), 10-17.
- Invernizzi, M. & Hayes, L. (2004). Developmental-spelling research: A systematic imperative. *Reading Research Quarterly, 39*(2), 216-228.
- Johnston, F. (2001). Exploring classroom teachers' spelling practices and beliefs. *Reading Research Instruction, 40*(2), 143-155.
- Joseph, L.M. (2000). Developing first graders' phonemic awareness, words identification and spelling: A comparison of two contemporary phonic instructional approaches. *Reading Research and Instruction, 39*(2), 160-169.
- Kroenke, R.L. (2010). *The effects of explicit word study instruction on fourth grade word knowledge, reading comprehension, oral reading fluency, and everyday spelling accuracy*. (Doctoral dissertation). Retrieved from https://www.bakeru.edu/images/pdf/SOE/EdD_Theses/Kroenke_Becky.pdf
- Leedy, P. D., & Ormrod, J. E. (2013). *Practical research: Planning and design*. Pearson Education, Inc.
- Maslin, P. (2003). *A review of basal reading programs in first grade*. (Unpublished

- doctoral dissertation). University of Virginia, Charlottesville.
- Ness, M.K. (2010). Examining one class of third-grade spellers: The diagnostic potential of students' spelling. *Reading Horizons*, 50(2), 113-130.
- Pearson. (n.d.). *AimswEB*. Retrieved from <http://www.aimsweb.com>
- Reed, D.K. (2012). *Why teach spelling?* Portsmouth, NH: RMC Research Corporation, Center on Instruction.
- Schlagal, R. (2002). Classroom spelling instruction: History, research, and practice. *Reading Research Quarterly*, 4(1), 44-57.
- Sharp, A.C., Sinatra, G.M., & Reynolds, R.E. (2008). The development of children's orthographic knowledge: A microgenetic perspective. *Reading Research Quarterly*, 43(3) 206-226. doi 10.1598
- Wallace, R.R. (2006). Characteristics of Effective Spelling Instruction. *Reading Horizons*, 46(4), 267-278.

APPENDIX A. DEVELOPMENTAL SPELLING ANALYSIS (DSA)

THE SCREENING INVENTORY

Overview

The purpose of the Screening Inventory is to help teachers (and researchers) quickly predict a child's Stage of Development. This information is necessary so that the appropriate portion of the Feature Inventory can then be administered. However, it should be noted that the Screening Inventory is optional and may be omitted if the child's stage of word knowledge is already established. The inventory is not intended to be given repeatedly. Due to its brevity, students may recall words on the list and show effects from learning. Once the Stage of Development is known, results from the Feature Inventory can be used to determine future testing starting points.

Because results from the Screening Inventory are used to guide Feature Inventory testing, their accuracy in pinpointing Stage of Development is important. During the 1992 administration of the *Developmental Spelling Analysis*, the Screening Inventory accurately predicted students' Stages of Development in over 90% of the cases. In some instances, the Screening Inventory revealed that students were in transition from one stage to another. Sometimes these individuals needed to complete two of the Feature Inventory lists before the actual Stage of Development could be determined.

Administration

The Screening Inventory may be given to an entire class at one time, to small groups, or even to individuals. (Reproducible Screening Answer Sheets may be found in the Appendix.) It consists of twenty words which become progressively more difficult. Each set of five words focuses on a different stage of word knowledge, beginning with Letter-Name. **All students do not need to complete all twenty words. Once a student has spelled less than two words correctly out of a set of five, testing for that child may stop.**

The following guidelines should be considered:

1. Be familiar with the Inventory.
2. Keep distractions to a minimum, and encourage a relaxed atmosphere.
3. Remove from view any of the Inventory words that might be on display.
4. Instruct students to print their responses so that scoring will be easier. Sharpened pencils also help.
5. Speak clearly and distinctly when reading the items; avoid over-emphasizing parts of the target word.
6. Dictate the number of the item, say the word, read the sentence, and then repeat the word before moving on to the next item. (Primary grade teachers may wish to omit the sentence if the children find it distracting.)
7. Allow sufficient time for students to respond, but move quickly through the test.
8. Encourage reluctant spellers to write what they can.

THE SCREENING INVENTORY

Directions: I AM GOING TO SAY SOME WORDS THAT I WANT YOU TO SPELL FOR ME. SOME OF THE WORDS WILL BE EASY TO SPELL AND SOME WILL BE MORE DIFFICULT. WHEN YOU DON'T KNOW HOW TO SPELL A WORD, JUST DO THE BEST YOU CAN. EACH TIME, I WILL SAY THE WORD, THEN USE IT IN A SENTENCE, AND THEN I WILL SAY THE WORD AGAIN.

1. hen The hen sat on her eggs.
2. wish The boy made a wish and blew out the candles.
3. trap A spider web is a trap for flies.
4. jump A kangaroo can jump high.
5. brave A brave dog scared the robbers.
- * * * * *
6. smile A smile shows that you're happy.
7. grain One kind of grain is called wheat.
8. crawl The baby can crawl but not walk.
9. clerk The clerk sold some shoes to me.
10. clutch The clutch in the car needed fixing.
- * * * * *
11. palace The king and queen live in a palace.
12. observe I like to observe birds at the feeder.
13. shuffle Please shuffle the cards before you deal.
14. exciting The adventure-story I'm reading is very exciting.
15. treason The man was found guilty of treason.
- * * * * *
16. column His picture was in the first column of the newspaper.
17. variety A grocery store has a wide variety of foods.
18. extension The workers need an extension ladder to reach the roof.
19. competition There was much competition between the two businesses.
20. illiterate An illiterate person is one who cannot read.

STOP WHEN A CHILD HAS SPELLED LESS THAN 2 WORDS CORRECTLY OUT OF ANY SET OF 5.

The Screening Inventory's Prediction Chart
for Stages of Development

Inventory Score	Predicted Stage(s)
20	DC
19	DC
18	DC
17	DC
16	SJ/DC
15	SJ/DC
14	SJ
13	SJ
12	SJ
11	WW/SJ
10	WW/SJ
9	WW
8	WW
7	WW
6	LN/WW
5	LN/WW
4	LN
3	LN
2	LN
1	LN *
0	LN *

* Keep in mind that children achieving scores such as these may or may not be Letter-Name stage spellers.

Figure 1. Screening Inventory Prediction Chart.

APPENDIX B. AIMSWEB CURRICULUM BASED MEASURE (CBM)

CBM provided the testing procedures to be able to do Numbers 1, 2, and 4. By developing graded and equivalent testing materials of about equal difficulty tied to general curriculum, (Number 3) General Outcome Measurements (GOMs) evolved. Thus, the testing procedures known as CBM are used in an testing approach called General Outcome Measurement.

The Spelling General Outcome Measure: Spelling Curriculum-Based Measurement (S-CBM)

Briefly, this workbook assumes that the user is familiar with the idea that Curriculum-Based Measurement (CBM) is used as a General Outcome Measure. A General Outcome Measure is not intended to make specific statements about how the student is currently performing on a daily or weekly lesson or unit, but to be able to make broader statements like: What is this student's level of general spelling skills compared to other students, or is this student progressing sufficiently in spelling?

In S-CBM, the difference between a traditional spelling test, is not just in the fact that the testing period is shorter or that spelling words are dictated at a carefully set pace. A major difference is that the spelling words are a random sample of *all* the words from graded spelling words. Therefore, fourth-graders may be given 17 words randomly selected from a broad pool of fourth-grade words. The words would be dictated to them every 7 seconds. This type of testing requires that students are tested on a combination of words that they have already learned and words that they will learn to spell in upcoming weeks or months to be good spellers.

A summary of this test by student grade, how long the test is, how students are tested, and what is scored is shown in the table below.

Area	Timing	Test Arrangements	What is Scored
Spelling General Outcome Measure (S-CBM) Grades 1-2	2 minutes New word dictated every 10 seconds	Group or Individual	# of Letters Spelled in Correct Sequence and # of Words Spelled Correctly
Spelling General Outcome Measure (S-CBM) Grades 3-8	2 minutes New word dictated every 7 seconds	Group or Individual	# of Letters Spelled in Correct Sequence and # of Words Spelled Correctly

Examiners use the set of standard directions shown on the next page. Although a little wordy for students initially, field-testing these directions for almost 20 years has resulted in quality responses from most students. Some students may not catch on initially and because the task is novel, we recommend that a short practice test be given. Once students are comfortable with the spelling test, examiners can use the shortened "familiar" directions.

A final difference in spelling is the score that we are most interested in. Like traditional spelling tests, S-CBM can be scored for the number of words spelled correctly (WSC). However, because we are looking for a more exact way of assessing spelling improvement, and because we want to be sensitive to the fact that students will be asked to spell words that they haven't been taught, the most important S-CBM score is the number of Correct Letter Sequences (CLS). As will be shown in this workbook, CLS counts pairs of letters that are placed together correctly within a word. In a sense then, students can receive partial credit for words that in their entirety are incorrect as they progress down the path of becoming good spellers.

S-CBM Standard Directions for 2-Minute Administration

1. Students have lined paper numbered 1 to 12 (dictated every 10 seconds), or 1 to 17 (dictated every 7 sec).

2. Say this to the student(s):

We're going to take a 2-minute spelling test. I am going to say some words that I want you to spell on the sheet of paper in front of you. Write the first word on the first line, the second word on the second line, and so on. I'll give you (7 or 10) seconds to spell each word.

When I say the next word, write it down, even if you haven't finished the last one. You will receive credit for each correct letter written. Are there any questions? (Pause) Let's begin."

3. Say the first word and start your stopwatch (or start the tape recorder).

4. Say each word twice. Use homonyms in a sentence.

5. Say a new word every 7 or 10 seconds.

6. Say "you should be on the fifth word which is ..." (every 5th word for younger children).

7. Monitor students to ensure they are writing on the correct line.

8. Do not respond to student questions.

9. After 2 minutes say, "Stop. Put your pencils down."

Familiar Shortened Directions

Substitute...

"We're going to take a 2-minute spelling test. When I say the word, write it down.

Copyright © 2002 by NCS Pearson, Inc.

All rights reserved. No part of this book may be reproduced or transmitted in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

AIMSweb® Standard Spelling Progress Monitor Assessment List #4 (1st Grade)

Given By: _____

Date Given: ____ / ____ / ____

ID	Word	CLS	CCLS
1	snug	5	5
2	like	5	10
3	roof	5	15
4	not Do not touch it.	4	19
5	wet	4	23
6	up	3	26
7	lamp	5	31
8	says	5	36
9	card	5	41
10	rake	5	46
11	hill	5	51
12	burn	5	56
Total CLS			56

APPENDIX C. STORYTOWN SPELLING LISTS

List One:

am, at, cat, can, ran, man, map, tap, a, the

List Two:

hat, had, sad, sat, bat, bag, at, can, help, now

List Three:

in, pin, pig, big, dig, did, had, sat, too, no

List Four:

pick, pack, tack, back, sack, sick, big, in, hold, so

List Five:

top, hop, not, hot, dot, lot, back, pick, oh, yes