

INCREASING THE ORTHOGRAPHICAL KNOWLEDGE IN SECOND GRADE
STUDENTS THROUGH THE USE OF A WORD STUDY PROGRAM

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Carole (Kelly) S. Spurgeon

INCREASING THE ORTHOGRAPHICAL KNOWLEDGE IN SECOND GRADE
STUDENTS THROUGH THE USE OF A WORD STUDY PROGRAM

A Field Study

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In Partial Fulfillment

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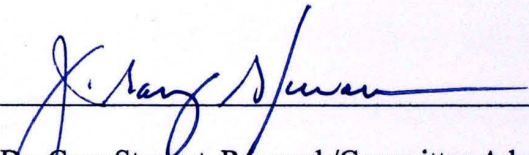
Carole (Kelly) S. Spurgeon

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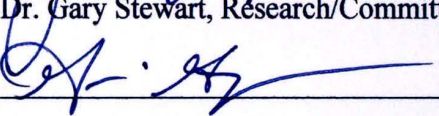
December, 2013

To the College of Graduate Studies:


We are submitting a Field Study written by Carole (Kelly) Spurgeon entitled "Increasing the Orthographical Knowledge in Second Grade Students Through the Use of a Word Study Program." We have examined the final copy of this Field Study for form and content. We recommend that it be accepted in partial fulfillment of the requirements for the degree of Education Specialist.



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Accepted for the Graduate and Research Council



Dean, College of Graduate Studies

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III. METHODOLOGY	22
Research Design.....	22
Participants.....	22
Instruments.....	23
Procedures	23
IV. RESULTS	26
Research Questions and Hypotheses.....	26
Research Question 1	26
Null Hypothesis 1	26
Research Question 2	27
Null Hypothesis 2	27
Research Question 3	28
Null Hypothesis 3	28
Research Question 4	29
Null Hypothesis 4	29
V. SUMMARY, DISCUSSION, IMPLICATIONS, CONCLUSIONS.....	31
Summary.....	31
Discussion.....	31
Implications.....	32

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ABSTRACT

Carole (Kelly) Spurgeon. Increasing the Orthographical Knowledge in Second Grade Students Through the Use of a Word Study Program.

The purpose of this causal-comparative study was to determine the impact of a word study program, specifically Words Their Way, on three second-grade classrooms in a low-socioeconomic elementary school in a Middle Tennessee metropolitan school district.

Four questions were posed in this Field Study. Question 1: Is there a difference between what is presented in the basal for second-grade spelling instruction and what is taught in Words Their Way? Question 2: Is there a difference in the mastery of spelling levels (e.g. -ed endings, doubles, blends, etc.) of students using word study based on gender? Question 3: Is there a difference in the mastery of spelling levels (e.g. -ed endings, doubles, blends, etc.) of students using word study based on socio-economic status (utilizing free and reduced lunch designations)? Question 4: Is there a significant difference in the mastery of spelling levels (e.g. -ed endings, doubles, blends, etc.) of students using word study based on ethnicity? The data examined in this Field Study were the assessment scores in spelling from the beginning and end of the year. The data was entered into an Excel spreadsheet to analyze the data. The null hypotheses were tested and analyzed at the .05 level of significance.

The first hypothesis was there are no statistically significant gains in the pre-test and post-test assessments of students who use a Word Study program for spelling when based on gender. The results revealed that the difference in gain based on gender was not

significantly different with a p value of .82. The second hypothesis was there are no statistically significant gains in the pre-test and post-test assessments of students who use a Word Study program for spelling when based on ethnicity. Results showed no statistically significant difference with a p value of .0.74. The third hypothesis was there are no statistically significant gains in the pre-test and post-test assessments of students who use a word study program for spelling when based on socio-economic status.

Due to the low number of students who were not classified as low Socio-Economic based on free and/or reduced lunch status, the data regarding that hypothesis was in-conclusive.

The last hypothesis was that there are no statistically significant variances in the list of orthographic features students learn in a word study program for spelling versus the basal-reading program, Scott-Foresman.is not quantifiable in nature.

TABLE OF CONTENTS

I. INTRODUCTION	1
Statement of the Problem	1
Purpose of the Study	1
Research Design	2
Research Questions	3
Null Hypothesis	3
Definition of Terms	4
II. REVIEW OF LITERATURE	6
Traditional Practices	9
Transitional Practices	9
Student Oriented Practices	9
Morphological System	12
Phonological System	13
Orthographic System	14
Emergent.....	15
Letter Naming.....	15
Within Word Pattern.....	16
Syllables and Affixes.....	17
Derivational Constancy.....	17

Conclusions.....	32
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TABLES

Table 1	Participating Second Grade Composition.....	23
Table 2	Scoring Table by Feature.....	24
Table 3	Gender Comparison.....	27
Table 4	Socio-Economic Comparison.....	28
Table 5	Ethnicity Comparison.....	30

REFERENCES.....	34-38
-----------------	-------

APPENDICES	39-46
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Appendix A: Clarksville-Montgomery County Board of Education	
Letter of Approval to Conduct Research	40-41
Appendix B: Austin Peay State University Institutional Review Board	
Letter of Approval to Conduct Research	42-43
Appendix C: Letter Naming Assessment	
Letter Name Letter Name Answer Card	44-45

CHAPTER 1

INTRODUCTION

Statement of the Problem

Being a good speller appears not to be of critical social value any more. With the onslaught of technical gadgets that can check and correct spelling seemingly as fast one can think the word, having good spelling skills is becoming a thing of the past. This is especially true with the acceptability of texting acronyms in our communication such as *LOL* (laugh out loud), *BFF* (best friend forever), *TTYL* (talk to you later), *BTW* (by the way), etc. In schools, however, spelling skills are still taught and tested every week. Even with the big push toward STEM (Science, Technology, Engineering, Math) and the increase in reading (e.g. 90-minute reading block per day), the need for students to master spelling skills remains as relevant and necessary as always.

Purpose of the Study

The purpose of this study was to determine the effect of a word study program on second-grade students' orthographic learning. The student population for this study was 32-second graders in a Middle Tennessee Metropolitan Elementary School. Pre-tests and post-tests were administered using the spelling inventory created by Kathy Ganske (2000) in *Word Journeys*. Measurement of growth in orthographic knowledge was determined and conveyed to what should have been learned using the spelling lessons in a traditional, second-grade basal-based reading program. Scott-Foresman Reading Series, the available reading instruction program, would have been used ("Scott Foresman Reading"). However, according to the U. S. Department of Education, Institute of Education Sciences What Works Clearinghouse (2013), as a result of a faculty

vote in 2012, it was decided that the Words Their Way Word Study program would be used in lieu of other programs. Words Their Way is a program for phonics, vocabulary, and spelling instruction for students that involves examining, manipulating, comparing, and categorizing words to help students achieve mastery in recognizing, spelling, and defining specific words.

Research Design

The research design will be quantitative and utilize nominal data with descriptive stats. The dependent variable will be the pre-test and the post-test archival scores on the Word Journeys spelling inventory. The independent variables will be the amount of instruction time that each teacher utilizes which includes small group time for word study, homework given in word study, and assessments administered weekly or every other week, such as a typical spelling test would be given.

The instrument will be the spelling inventories presented in *Word Journeys*. Used as a pre-assessment, the inventories will have been given to the students by their individual teacher in August 2012. The post-assessment that will be administered in May 2013 is identical. The students begin with the inventory assessment for the first stage, Letter Naming, so named because at this stage students are beginning to apply the alphabet principles to consonants (Ganske, 2000). If the student spells 12 or more words correctly, the assessment for the next stage, Within Word Pattern, is administered. At this second stage, students spell most single-syllable, short vowel words correctly and progress from the sound-by-sound spelling found in the Letter Naming stage (Ganske, 2000). The assessments continue through Syllable Juncture, which looks at multi-syllable words and patterns and then to Derivational Constancy, which focuses on word

meaning and related word parts (Ganske, 2000). This is provisional if the student is mastering the spelling assessments for each stage. The assessment on which they master no more than 11 words is the level where they begin their study of words. Most students in the second-grade should be somewhere in Letter Naming or Within Word Pattern.

Research Questions

The following research questions guided this study:

1. Is there a difference between what is presented in the Basal Reading Program for second-grade spelling instruction and what is taught in *Words Their Way*?
2. Is there a difference in the mastery of spelling levels (e.g. -ed endings, doubles, blends, etc.) for students using Word Study based on gender?
3. Is there a difference in the mastery of spelling levels (e.g. -ed endings, doubles, blends, etc.) of students using word study based on socio-economic status (utilizing free and reduced lunch designations)?
4. Is there a significant difference in the mastery of spelling levels (e.g. -ed endings, doubles, blends, etc.) for students using word study based on ethnicity?

Null Hypotheses

The following null hypotheses were examined:

1. There are no statistically significant gains in the pre-test and post-test assessments of students who use a Word Study program for spelling when based on gender.
2. There are no statistically significant gains in the pre-test and post-test assessments of students who use a Word Study program for spelling when based on ethnicity.

3. There are no statistically significant gains in the pre-test and post-test assessments of students who use a Word Study program for spelling when based on socio-economic status.
4. There are no statistically significant variances in the list of orthographic features students learn in a Word Study program for spelling versus the basal-reading program, Scott-Foresman.

Definition of Terms

The following definitions describe important terminology that is related to this study:

1. **Alphabetic principle:** the concept that letters are used to represent sounds.
2. **Consonant blends:** two or more consonants grouped together in which each consonant retains its original sound, such as *sm*.
3. **Diagrams:** letter combinations that represent a different sound than one made by combining the sounds of each individual letter, such as *ch*.
4. **Diphthongs:** two vowel combinations that form a new sound, such as *oi/oy* and *ow/ou*.
5. **Grapheme:** symbol representing sound.
6. **Morpheme:** smallest meaningful unit of sound.
7. **Orthography:** the spelling system of a language.
8. **Phoneme:** smallest unit of sound.
9. **Phonics:** the relationship between letters and sounds.

10. Word study: a learner-centered, conceptual approach to instruction in phonics, spelling, word recognition, and vocabulary (Bear, Invernizzi, Templeton, & Johnston, 2008).

CHAPTER II

REVIEW OF LITERATURE

Beginning in Kindergarten, students begin to use spelling in their writing. When they learn their initial letter sounds, they begin to see the relationship between what they are saying and the symbols of those sounds. In the world of inventive spelling, “K-A-T” represents “cat” and “G-U-S” becomes “juice.” As students move into first grade, a more formal approach to spelling begins. Here is where most teachers utilize the spelling lists and lessons that correlate to the story in a basal reader. The spelling lists are matched with the story to have more relevance to the student and to ease lesson transition for the teacher. This relationship of spelling words and the basal reader continues until fifth grade, the last year for formal spelling instruction. Henry (2003) stated that:

Spelling instruction has changed little since the 1950's in most classrooms.

A typical procedure is that children receive a list of twenty-five words on Monday. They go over the words with the teacher and are expected to memorize the sequence of letters in each word. Children practice during the week, often having a pre-test on Wednesday or Thursday. The real test comes on Friday. Most children, even those with reading and language problems, do well on the Friday test but often cannot write the word correctly in context two or three weeks later. (p.10)

There are many different types of spelling programs available to educators today. Anything from an online curriculum to a reading-based series is touted as research-based spelling programs. Teachers who instruct students in orthographic knowledge must be aware of the array of available choices and what will work best to meet the needs of their

students.

Most often, spelling as a subject takes a back seat to Reading and Language Arts. Because of this, more money will be spent on reading textbooks than on those specifically for spelling. This is readily observable when school systems purchase Reading series and use the spelling program from the stories instead of investing in separate programs. Although Reading is deemed more important, “spelling is more difficult than reading” (Rippel, 2013, p. 1, para.2).

Researcher Marie Rippel (2013) stated that “Reading involves recognizing words, while spelling involves reproducing words” (p. 1, para.1). In English, there are more than 250 ways to spell the 45 sounds produced from 26 letters (Moats, 2005). With this information and data, it is easily discernible why some children have difficulty with spelling. For example, since there are multiple ways to spell long *-a* (a-consonant-*e* as in *take*, *ai* as in *pain*, and *ay* as in *play*), such variation makes learning \difficult. Other vowel diagraphs, *oi/oy* and *ou/ow*, are the most complicated for children to learn because their sounds are neither short nor long (Bear et al., 2008). The referenced vowel diagraphs are also spelled in multiple ways (although *ouch* and *owl* are spelled differently, they share the same vowel sound). Children need to master these complex, and often irregular spelling rules in order to build automatic word recognition and become fluent readers. It is important that children are able to automatically recognize words and read fluently, because decoding and comprehension compete for short-term memory capacity (Pressley, 2006).

Understanding spelling development is important not only because of the pedagogical interest in comprehending how children acquire this major facet of literacy,

but also because children's early spellings provide information about their initial knowledge of the orthographic and phonological characteristics of writing that could not be obtained in other ways. Unfortunately, most teachers don't get to choose their curriculum because individuals or committees usually dictate those choices in their school systems charged with the responsibility of determining the best Reading Programs for their teachers and students.

Instructional programs for spelling usually emphasize the most frequently misspelled words, which tend to share a word-by-word, rote memory dependent approach (Barone, 1992). Templeton and Morris (2001) pointed out that although memory plays an important role in learning to spell, it is not the only role. These programs do not provide opportunities for teachers to differentiate learning for students. Regardless of the spelling level at which students may be performing, they are expected to study the same list of words. In his book, *Spel-- is a Four Letter Word*, Richard Gentry (1987) stated:

Too much that is known about how to teach spelling isn't being put into practice. I can think of no subject we teach more poorly or harbor more myths about than spelling. In spite of volumes of research, teachers, still use the same unsubstantiated teacher formulas. The spelling strategies and lessons you remember...whether you were in school one, two, or three generations ago -- are still in use...And parents may be bad spellers themselves, remembering only what school taught them -- that bad spelling means bad kid...Some of the myths about spelling actually prevent normal spelling development. Yet they are widespread.

They are considered part of our conventional wisdom. (p. 11)

Simply stated, spelling is poorly taught and common instructional strategies used for

spelling today have been in use for a multitude of years. Heald-Taylor (1998) referenced three practices of spelling instruction. They are as follows:

1. **Traditional practices** focus on instruction, drill, memorization, imitation, rote learning, and correctness. Traditional practices are taught formally as a separate subject, giving it a very sterile feeling. Teachers give information. Students practice information. Teachers test at the end of the week.
2. **Transitional practices** focus on integrating spelling strategies and the importance of reading in learning to spell. Words studied in spelling come from student reading material so phonetics and spelling rules are learned in a context meaningful to the child. Students are given direct instruction in phonics, spelling rules, and study procedures followed by weekly testing. Spelling is mainly learned in conjunction with other types of word study, like word sorts and games. Evaluation is both formal and informal, with formal evaluation coming from weekly and unit tests; informal evaluation comes from monitoring spelling competence in word sorting.
3. **Student-oriented practices** focus on learning to spell as a developmental process, where reading provides a context for learning to spell, and spelling is a component of writing. The teacher's role changes from giving information to facilitating learning based on individual student needs. Students are expected to figure out much of their spelling on their own. Teachers can use student individual spelling profiles and conference logs to monitor progress.

(p. 406)

Children need to take risks when learning to spell (Gentry, 1987). They need to experience invented or developmental spelling and not have the pressure of correctly spelling words beyond their developmental level when they are writing. Children should understand that when spelling words, being wrong is part of the process so that rather than being afraid of writing, they are learning from it (Gentry, 1987).

When students do purposeful writing, they experience words they may not know how to spell, but the teacher can guide them with instruction to help them learn strategies to use when they don't know how to spell a word (Graham, Harris, & Chorzempa, 2002). Research indicated a close relationship between spelling, reading, and writing, so spelling needs to be stressed and taught throughout the curriculum; it shouldn't be a fragmented subject (Noell, Connell, & Duhon, 2006).

Just because students are experiencing spelling in their writing, does not mean they shouldn't receive direct spelling instruction. Many teachers include the learning of words in their spelling programs, but there may not be agreement in a school about whether children should regularly have words to learn, who should choose them, how children should learn the words, and how their learning should be assessed (Snowball & Bolton, 1999). Combining writing with spelling instruction will give students tools to use when needing to spell an unknown word (Henry, 1997). Spelling can be taught as a sensible and interesting task that strengthens the relationship between Reading and writing, and helps build vocabulary knowledge.

Masterson and Crede (1999) noted that a worthwhile spelling program guides children to recognize and develop the strategies and habits of competent spellers. The teacher and student should have goals to understand the primary purpose for learning

about words, develop an interest in words, apply the spelling strategies to new words, learn words they frequently use, and be able to identify and use different resources to help them with their spelling.

Students deserve to be taught and challenged beyond the basal workbook, beyond more than one-size-fits-all programs that involve strict memorization with little to no direct instruction in other curricular areas. Children learn at different rates and their instruction should bear a resemblance to that.

How we teach children is more important than what we teach them, because if the methods and strategies we use to teach them are valuable, useful, and engaging tools, they can quite possibly remain with them forever. Children deserve to be encouraged to love words, to see the fun and excitement in learning, and to learn at an individual spelling level that is appropriate for them. Likewise, it is important to encourage children to move through the stages of spelling development at their own pace to help them lay a foundation for word learning and understand the way language operates. Meaningful practice over an extended period of time allows children to set a pace of learning and to establish strategies for spelling accurately (Forester, 2001).

Shankweiler and Lundquist (1992) noted that both phonologic and morphologic aspects of linguistic awareness are relevant to success in spelling and reading, and there is even some evidence that a better understanding of the American English Orthographic System (using the correct letters to spell words) would lead us toward a better teaching of literacy (Cummings, 1988). Spelling demands the use of a variety of strategies to deal with irregular spelling features. These strategies need to be in place to help both the

strong and the struggling spellers, similar to strategy instruction already used for reading (Graham, et al., 2002).

Morphological System

Our language is a morphological puzzle that is continuously manipulated to increase word power and the ability to communicate with nuance (e.g., verbs created from nouns like *emailing*). Studies suggest that proficient readers and spellers use morphological knowledge as they read and spell while poor readers and spellers “lack awareness of the presence of base forms within derived counterparts, ...specific knowledge about how to spell suffixes, and how to attach suffixes to base words correctly” (Carlisle, 1987, p. 106-107).

In the Oxford English Dictionary (2013), morphology is defined as the study of the form of words. For example, in the sentence *Friends gave her presents*, the morphological features of friend (+s) and present (+s) show that adding the letter (s) makes the noun plural. It also shows that *gave* is the past tense verb of the word *give*. Instructing students in morphology provides students with decoding strategies that help them analyze and interpret new words.

Morphological knowledge also refers to the understanding of the relationships between root words and their derivations. Morphological awareness has been identified as a significant predictor of spelling ability, independent from phonology (Muter & Snowling, 1997); training in morphological skills has been shown to lead to improvements in spelling accuracy (Nunes, Bryant, & Olsson, 2003). There is evidence indicating that children’s spellings are affected by morphological structure and depend on

children's knowledge of morphology (Treiman & Cassar, 1996; Bourassa, Treiman, & Kessler, 2006).

Phonological System

Phonological awareness refers to the ability to reflect on and manipulate the phonemic segments of speech (Ehri, 1989; Treiman, 1991), and appears to be closely related to spelling performance, particularly in the early years of academic instruction (Rivers, Lombardino, & Thompson, 1996). According to Gentry (1982), phonological perspectives that have been studied and theorized stage models of spelling development are slightly different but follow similar patterns:

1. Children move through stages beginning with a non-phonological stage to a later stage of phonetically adequate spelling.
2. Children rely on different types of knowledge as they pass through the different stages or phases. (p.195)

The development these studies describe focus on the children's attempts to represent the sound of a word in their spellings.

Ehri (1987) and Gentry (1982) proposed these three-stages of spelling development.

1. **Preliterate stage:** Writing consists of scribbles, drawings, and some letters. During this stage, children develop early concepts such as differentiation between writing and pictures, directionality (i.e., writing from right-to-left, top-to-bottom), and basic phonemic awareness.
2. **Letter-name stage:** Phonemic awareness skills improve and children employ

the alphabetic principle (representing each sound in the target word by a letter). Invented spellings are based on letter names (i.e., phonetic similarity between target sounds and the names of letters).

3. Within-word patterns stage: Learned orthographic patterns such as those governing the use of short and long vowels. In addition to the pattern principle, children begin to employ the pattern by meaning principle (e.g., spelling the past tense morpheme as -ed).

In order to learn how to read, the phonemes that a child knows from spoken language (phonology) must be represented by the child in form of printed letters on the page (orthography).

Orthographic System

A students' knowledge of spelling is what is referred to as orthography – the “correct sequences of letter in the writing system” (Bear, Invernizzi, Templeton & Johnston, 2008, p.1). There are three different parts or “layers” of English orthography (Bear, et al., 2008 p.8): alphabet, pattern, and meaning. In the alphabet layer, a letter represents each sound. For example c-a-p are the letters in *cap*. In the pattern layer, single sounds can often be spelled with a silent-*e* that has no sound so the word *cap* becomes *cape* even though the sound of long or short /e/ is not pronounced. The meaning layer aids the speller in understanding what specific letters mean; a c-a-p is worn on the head and a c-a-p-e is worn around the neck. A good spelling program can help a student better distinguish this strategy, as well as many others.

The research of the late-twentieth century led to the belief that children move through "a common developmental sequence of acquisition of orthographic knowledge"

(Templeton & Morris, 2000, p. 531). Stage theories were the leading approach to explain developmental spelling. Stage models described learners underlying word knowledge at points along a continuum (Templeton & Morris, 2000).

According to Nelson (1989), Henderson and his students at the University of Virginia originally proposed five stages of spelling development. They are:

1. *Emergent*: scribbles, drawing and some letter writing
2. *Letter Naming*: children enjoy representing sounds with letters
3. *Within-Word Patterns*: orthographic patterns are learned
4. *Syllables and Affixes*: use of doubling principle and syllabication
5. *Derivational Constancy*: roots and derivations used consistently (pp.263-270)

These layers build upon and interact with one another.

Emergent spelling typically describes children 0 to 5 years old, who have yet to be exposed to formal reading instruction. Children initially produce scribbles then move on to pretend writing. Pretend writing is usually linear and, according to a child, represents a word or words, although the marks still look like scribbles. By the end of this stage children use letters, especially the letters in their names, and have memorized a few written words. The alphabet layer of orthography begins to appear in this stage as children begin to mimic what is seen in print around them.

Letter Naming stage is the second phase. This stage primarily represents children in kindergarten through the middle of second grade, and is therefore relevant to the current study. It consists of students using letter names to represent sounds, such as using *y* to spell *w*, because the first sound of the letter name *y* is pronounced /wei/. As students

begin to learn the alphabet and the sounds each letter makes, they begin to put letters together to make words. Initial and final consonants are usually the first letters that a speller becomes competent (Ganske, 1993). An example of this is to spell the word *pat* as *PT*. Students at this stage can correctly spell sight words such as *and*, *you*, and *like*. Toward the end of this stage, more phonemic sounds are in place such as writing *HRS* for the word *horse*. Early in this stage a child uses consonants, often the first and last consonant sounds of a word, and might spell the word *what* as *YT*. In the second half of this stage, children use vowels, in addition to consonants, to spell. They also segment sounds in consonant blends, such as *gr* and *ch*. By the end of the letter name-alphabetic stage, many students are able to spell words with short-vowels, diagraphs, and consonant blends correctly. These spellers normally omit preconsonantal nasals, such as the *m* in *bum*. Students enter the next phase when they are able to spell these correctly.

Within -Word Pattern is the third, and longest, spelling stage. This stage is also relevant to the current study. It starts as children begin to read independently, typically at the end of first grade, and lasts until about ten years of age. Students at this stage are close to being fluent readers (Ganske, 1993). The age group for this stage is typically 7-10 years old, but many low-skilled readers are also at this level (Bear et al., 2008). This stage lasts longer than the previous two because it includes long and short vowel patterns, homophones, r-controlled vowels (i.e., *girl*), triple-letter blends (i.e., *squid*, *throb*), final sounds like *-tch* and *-dge*, and many more. These spellers not only spell the common long vowel pattern of CVCe correctly, but also use other long vowel patterns to spell words. Since there are so many long vowel patterns in addition to diphthongs, such as *ou/ow* and *oi/oy*, students may confuse the patterns until they reach mastery. For

example, a child may spell the word *train* as *trane*. This demonstrates that they are using, but confusing, long vowel patterns.

Syllables and Affixes most often begins in third grade and lasts through middle school. This spelling stage includes syllable juncture patterns, such as open and closed syllables. A syllable is open when it ends with a vowel, which indicates a long vowel sound. A syllable is closed when it ends with a consonant, which indicates a short vowel sound. Students in this stage also need to understand accented and unaccented syllables and use inflected endings, such as *ing* and *ed*. By the end of this stage students spell prefixes and suffixes that change the meaning of words. The focus of this stage is also on compound words and doubling of initial consonants. Homographs are introduced and homophones are reviewed.

Derivational Constancy is the final stage. This stage typically starts in middle school and last throughout adulthood. These spellers are aware of how the meaning of base and root words, of Greek and Latin origin, affects the spelling of words. For example, favorite may be misspelled as *faverite* unless one is aware of the relationship of *favor* to *favorite*. Many other errors made in this stage involve the schwa sound in unaccented syllables, such as in the second syllable of *imposition*. A person who knows this word is related to *impose* would be more likely to spell it correctly.

Knowing the stages of spelling development will help the teacher look for strategies for use in each students' stage. Henderson (1985) formulated a description of increasingly sophisticated stages of orthographic knowledge that students move through hierarchically from easier to more difficult. The stages are broad and are marked by changes in the types of spelling errors made by students. The stages have the key understandings in the layers of English orthography and students' knowledge of the

orthography (Bryant, Nunes, & Bindman, 1997).

The research presented here will not be a comparison of various programs but rather a look at one in particular, *Words Their Way* (Bear, et al., 2008). *Words Their Way* is a hands-on instructional approach in word study that provides a research-based approach for teachers to know their students word learning progress, to organize their instruction, and to help implement the approach. Word study is an approach to spelling instruction that moves away from a focus on memorization (Williams, Phillips-Birdson, Hufnagel, Hungler, & Lundstrom, 2009). It teaches students the necessary skills, but also engages them, interests them, and motivates them to learn about how words work.

Students need to be engaged in meaningful reading and writing, and have many opportunities to examine the words they read out of context as well. Word study teaches students how to look at words so they can deepen their understanding of how spelling works to stand for sound-symbol relationships in words and word meanings. Through this type of program, teachers can use a variety of activities to help students explore words and patterns.

Word study for spelling instruction also teaches students how to use word knowledge strategically to support their spelling attempts during writing activities and to help them decode unfamiliar words while reading (Bear & Templeton, 1998). Students also learn how words that are similar in spelling are frequently related in meaning, how to examine words to reveal consistencies within our written language system, and how to master the recognition, spelling, and meaning of specific words (Bear et al. 2008). Ivernizzi, Abouzeid, and Bloodgood (1997) suggested that teachers should link word study to literature to provide a flexible sequence that includes instruction in grammar, literacy

analysis, writing, and provide hands-on, repeated practice.

The two Word Study programs utilized in this study are *Words Their Way* (Bear et al., 2008) and *Word Journeys* (Ganske, K., 2000). Both are similar in program approach in that they have the same stages of spelling: emergent, letter naming, within word, syllables and affixes (“syllable juncture” in *Word Journeys*), and derivational relations (“derivational constancy” in *Word Journeys*).

In *Word Journeys*, Ganske (2002) presents four separate spelling analyses, which the teacher can give students in a whole group setting. Each analysis has a separate focus on each of the four developmental spelling stages and has a quantity of 25 words to spell. Depending on the grade level taught, teachers begin with the analysis for their age group and move up or down to a different analysis. For example, a teacher will give the assessment for within word to the entire class. After assessing the correctness of the 25 words given, those who got 22 or higher on that assessment will take the syllable juncture test. Students scoring lower than 12 will take the assessment for the letter naming stage, and so on.

Each word in the assessment correlates to a particular feature in that stage so although a student may have scored a 22 in within word, that doesn’t mean mastery of that stage. Instead, it means one or two orthographic features need to be mastered before the student moves to the stage of syllable juncture. Ganske (1999) proposed and utilized a screening inventory of spelling stages is accurate more than 90% of the time.

However, as good as Ganske’s screening is, it would not be complete without the word list for each stage presented in *Words their Way* (Bear et al., 2008). For once the teacher knows the stage and the orthographic feature at which a student is ready to learn

and the list of words to begin with is needed. Ideally, a teacher would put a student into one of no more than 5 groups for word study. The students would work on their given list of words, sort them into categories (i.e., same initial consonant, same ending, etc.), and record them into a journal for spelling. The teacher would also be able to work with each group individually for word meaning, spelling rules, and pronunciation. Every week (or two, depending on mastery), the students would be assessed on their knowledge of the words they had. If mastery of the orthographic feature did not take place, the students can practice more on those words until the next assessment.

Having a word study program of this nature allows for individual instruction and learning at the level that the student is ready to learn. Research suggests that if students are reading at various levels, their word knowledge is most likely different as well. This has to be considered when learning to spell (Fresch, 2000). By narrowing strategies on the zone of proximal development teachers can foster students' growth toward a mature written vocabulary (Invernizzi & Abouzeid, 1994). This will enable the student to feel more confident with schoolwork and reading since research shows a close relationship between spelling and reading (Noell et al., 2006).

Evidence supports using spelling instruction to enhance literacy development. Word study is a systematic approach to spelling that gives children a deeper understanding of English orthography. By comparing and contrasting words, students make generalizations that they can apply to the reading of unknown words (Bear et al., 2008). It is critical that children learn to automatically recognize words and read fluently, because decoding and comprehension compete for short-term memory capacity. According to Bear et al. (2008), word study is important to help students focus their

attention on making meaning, which is the purpose of reading.

Word study is developmental. Students in one class have multiple needs and traditional whole-class spelling instruction is inadequate to meet these needs. By examining students' invented spellings, instruction can match what spelling features a child "uses but confuses" (Bear et al., 2008, p. 21). This element is based on Vygotsky's zone of proximal development (1986). Targeting this zone for instruction builds on what students already know and moves forward with teacher guidance. Instruction is neither too easy nor too hard. The teacher works with children in differentiated small group instruction.

Word study is also an active and engaging process. While there are many games and activities to extend learning and motivate students, the main activity of word study is sorting words (Bear et al., 2008). Primary students compare and contrast words by categorizing them according to specific sounds and spelling features. With the assistance of a teacher, children have the opportunity to discover word features and make generalizations on their own. Sorting words is not simply a process of rote memorization, but a process of exploration where students use critical thinking while categorizing and manipulating words.

CHAPTER III

METHODOLOGY

Research Design

The teachers at the elementary school used in this field study had taken part in a professional development about Words Their Way, a word study program with a foundation in Henderson's five stages of spelling development (Bear et al., 2008).

Teachers were given a choice to implement this word study approach or to use the spelling lists in the basal reader provided by Scott-Foresman Reading (purchased by the school district). This study was designed to determine the extent to which a word study program affected the orthographic knowledge in the students of the two second-grade teachers that chose to use this method. To address this, a descriptive study was used utilizing qualitative methods to measure student learning in the 2012-2013 school year.

Participants

The second-grade students who participated in this study were from a Title I funded elementary school in a Metropolitan School district in Middle Tennessee. The school houses grades pre-Kindergarten through third grade. Sixty-one percent of students at this school were socio-economically disadvantaged, as defined by the number of students participating in the free or reduced-price lunch program. The total population for the 2012-2013 school year was 608 students. The majority of the student population was Caucasian. Eleven percent were Latino and 36% were African- American or black. Eleven percent were Caucasian. The remaining percent were Pacific Islander, American Indian, Asian, and mixed race students. Table 1 illustrates the composition of the 32 participating second-grade students. The column for socio-economic status (SES)

indicates that the number of students who qualify based on their free and/or reduced lunch status. The only two ethnicities represented in these classes are Caucasian and African-American.

Table 1

Participating Second Grade Composition

Gender	Group Total	Caucasian	African American	Low SES Caucasian	Low SES African American
Female	15	6	8	3	8
Male	17	11	6	3	4

Instruments

The Developmental Spelling Analysis (DSA) created by Kathy Ganske (2000) was administered to the participating second grade students. That DSA correlates directly to the Words Their Way program and is more thorough and easy to use than what is provided in Words Their Way. Appendices C and D show the two levels of assessment.

Procedures

At the beginning of the 2011-2012 school year, students were given the first assessment, Letter Naming, and if they had more than 12 correct, they were given the next assessment for Within Word. If they got more than 12 correct again, they took the assessment for Syllable Juncture. No students in this study took that assessment.

Each assessment was scored using the correlating Answer Card shown on Appendix D. Noting incorrect answers, the teacher transferred that information to the table below, crossing out the number that corresponded to what was missed on the assessment.

Table 2

Scoring Table by Feature

Letter Naming Stage				
A	B	C	D	E
4	2	3	1	7
10	12	5	6	9
21	13	11	8	18
22	14	15	17	19
24	16	25	23	20

For example, if a student missed numbers 6, 8, 17, 7, 9, 18, 19, and 20, the teacher would know that the student needs to begin his or her word study with Letter Naming D, affricates (ex. *ch* in church). Those sounds are g, j, h, dr, tr, and ch and are found in lesson 20 in *Words Their Way*. The teacher would begin that student's word study with that lesson and go forward from there, progressing through each lesson. During the week, the teacher meets with students in small groups, sorting the words by feature of the

lesson. Students also work on Word Study alone or with a partner, sorting the words, writing the words in sentences, and defining them. Mastery of each feature/lesson would take place when the student scores 80% or better on a weekly test of the words.

CHAPTER IV

RESULTS

Research Questions and Hypotheses

Research Question 1:

Is there a difference between what is presented in the basal reading program for second-grade spelling instruction and what is taught in *Words Their Way*?

Null Hypothesis 1:

There are no significant differences in the list of orthographic features students learn in a word study program for spelling versus a basal-reading program.

According to the Scott-Foresman website, students in second grade have 29 lessons in spelling where contractions are taught two different times (Scott-Forseman, 2008). Each level of *Words Their Way* has 50 lessons for students to progress through spelling features. Scott-Foresman (2008) included compound words, suffixes, and prefixes in their second grade list. These features are not given in the *Words Their Way* program until the Syllable Juncture stage.

Words Their Way suggested that second graders should be toward the end of Letter Naming, if not already in Within Word stage at the beginning of the school year. The results then show that although Scott-Foresman, a basal-based reading program, teaches three more features than what *Words Their Way* promotes for the grade level, the latter provides more opportunities for practice and progression. The basal program can

only move forward one week at a time, and often the series is not completed due to Holidays and other breaks in the school system's schedule (Scott-Foresman, 2008).

Because this study was approved only to look at the scores for word study assessment, no data was collected in regards to how other students did with regards to The Scott-Foresman series. Therefore, the Null Hypothesis 1 can be neither retained nor rejected until sufficient evidence is collected.

Table 3

Gender Comparison

Group	N	Mean	SD	St. Error
Female	15	26.20	24.27	6.27
Male	17	24.29	21.93	5.32

P= 0.82

Research Question 2:

Is there a difference in the mastery of spelling levels (e.g. *-ed* endings, doubles, blends, etc.) of students using word study based on gender?

Null Hypothesis 2:

There are no statistically significant gains in the pre-test and the post-test assessments of students who use a word study program for spelling when based on gender.

A paired sample *t*-test was conducted to assess Research Question 2 and the Null Hypothesis 2 to determine if there was a statistically significant difference in the pre-test and post-test assessments based on gender. The results in Table 3 indicate there was not a statistically significant difference with a *p* value of .82. Since the *p* value exceeded the .05 level or statistical significance, the Null Hypothesis was retained.

Table 4

Socio-Economic Comparison

Group	N	Mean	SD	St. Error
Classified	20	28.50	24.71	5.53
Not Classified	12	19.67	18.54	5.35

p=0.97

Research Question 3:

Is there a difference in the mastery of spelling levels (e.g. *-ed* endings, doubles, blends, etc.) of students using word study based on socio-economic status (utilizing free and reduced lunch designations)?

Null Hypothesis 3:

There are no significant gains in the pre-test and post-test assessments of students who used a word study program for spelling when based on socio-economic status.

As indicated in Table 4, a *t*-test was conducted and the *p* value exceeded the .05 Alpha level for statistical significance. Therefore, the Null Hypothesis relating to the number of students who were not classified as low Socio-Economic based on free and/or reduced lunch status was retained.

Research Question 4:

Is there a significant difference in the mastery of spelling levels (e.g. -ed endings, doubles, blends, etc.) of students using word study based on ethnicity?

Null Hypothesis 4:

There are no significant gains in the pre- and post- test assessments of students who use a word study program for spelling when based on ethnicity.

A paired sample *t*-test was conducted to assess Research Question 4 and to determine if there was a statistically significant difference in the pre-test and post-test assessments based on ethnicity as stated in the Null Hypothesis 4. The results reflected in Table 5 clearly indicate that there was not a statistically significant difference in the pre-test and post-test assessments based on ethnicity between the two groups, Caucasian and African-American.. Since the *p* value for the *t*-test in this area was a 0.74 and the Alpha level of 0.05 for statistical significance was exceeded, the Null Hypothesis 1 was retained.

Table 5

Ethnicity Comparison

Group	N	Mean	SD	St. Error
African-American	15	26.93	25.90	6.69
Caucasian	17	24.34	19.55	4.74

p=.074

CHAPTER V

SUMMARY, DISCUSSION, IMPLICATIONS, CONCLUSIONS

Summary

This study was conducted to determine if a word study approach to spelling would help improve the orthographic knowledge in second-grade students. Though the data was not conclusive, the overall data showed that students averaged a growth of 25 spelling features over the course of a year. Having more teachers be part of this study would have been helpful, and this year all teachers at this school are required to utilize the Words Their Way program.

Discussion

What about students who have not been introduced to and/or mastered the plethora of spelling rules, word families, suffixes, prefixes, doublets, etc.? Herein lies the problem. Because many schools are introducing word study programs for spelling such as Word Journeys, Words Their Way, Spelling Scholar, etc., there are many students that are not being introduced to all the instructional levels before leaving elementary school.

Most word study programs rely on an initial assessment for placement in a spelling level that is appropriate for the student's ability and moves forward or backward according to the student's mastery. For low achieving students or those that are not naturally good spellers, they will begin in a low level. Though initially ideal because the student is working at a low-frustration level, if the student does not progress quickly through the "stages," all of the spelling nuances will not be learned in time.

Implications

Though statistical significance supported Null Hypotheses, this study is beneficial to the teachers and administration of this school. They can continue with their present course of utilizing Words Their Way, knowing that student achievement is taking place. With the present implementation of Common Core, the basal reader is not being used in the same way it once was. More often, teachers are finding their own materials for close reads, materials that are informational in nature not narrative, and material that will also include the content areas of Science and Social Studies. This cannot be found in the current reading series that the spelling lessons are taken from. Knowing in the future that monies will not have to be spent updating a reading series that is not used will help the school leaders allocate those funds to better suit student needs.

Conclusions

The first research questions asks “Is there a difference between what is presented in the basal reading program for second-grade spelling instruction and what is taught in *Words Their Way*?” Though not quantifiable in nature, just counting the number of features that each requires for progression does show a difference. It can be assumed that students using a basal-based program may be taught more features because compound words, prefixes, and suffixes are included in the second-grade curriculum. However, all the lessons rarely get taught due to the school schedule, breaks, Holidays, etc. Also, the basal program does not allow for differentiation for students or a hands-on approach.

The next research question asks. “Is there a difference in the mastery of spelling levels (e.g. -ed endings, doubles, blends, etc.) of students using word study based on gender? Though not statistically significant, female students did achieve a slightly higher

rate of growth than did male students. The third research question asks, "Is there a difference in the mastery of spelling levels (e.g. -ed endings, doubles, blends, etc.) of students using word study based on socio-economic status (utilizing free and reduced lunch designations)?" There were not enough participants to adequately answer this question.

The last research question asks "Is there a significant difference in the mastery of spelling levels (e.g. -ed endings, doubles, blends, etc.) of students using word study based on ethnicity?" This data showed the most promise with $p=0.74$. A larger population testing is definitely needed, but it does give the teachers and administration at this school some ideas to think about.

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APPENDIX A

APPENDICES

Letter of Approval to Conduct Research

APPENDIX A

Clarksville-Montgomery County Board of Education

Letter of Approval to Conduct Research



May 1, 2013

Dear Ms. Spurgeon,

The Research Committee has met and approved your request to conduct research in the District using archival data looking at the growth in spelling knowledge of the second grade students at St. Bethlehem using their pre and post-test assessment scores from the 2012-2013 school year.

Sincerely,

A handwritten signature in cursive script that reads 'Sallie Armstrong'.

Sallie Armstrong, Ed.D.
Director of Instruction and Curriculum

APPENDIX B

Austin Peay State University Institutional Review Board

Letter of Approval to Conduct Research

Date May 9, 2013

RE: Study number 13-022

Dear Kelly Spurgeon,

Thank you for your recent submission to the IRB. We appreciate your cooperation with the human research review process.

This letter is to confirm that study 13-022 has been approved and that your study is exempt from further review by the APIRB.

You may conduct your study as described in your application effective immediately.

Please note that any changes to or deviations from the approved study must be promptly reported and approved before continuing. Some changes may be approved by expedited review; others require full board review. If you have any questions or require further information, you can contact me by phone (931-221-6106) or email (shepherdo@apsu.edu).

Again, thank you for your cooperation with the APSU IRB and the human research review process. Best wishes for a successful study!

Sincerely,

Omie Shepherd

Omie Shepherd, Chair
Austin Peay Institutional Review Board

Cc: Dr. Tammy Shutt

APPENDIX C

Letter Naming Assessment

LETTER NAMING ASSESSMENT

DSA Form A: Letter Name Answer Card			
1. j <u>e</u> t	D	16. gr <u>a</u> b	B
2. <u>s</u> h ip	B	17. <u>ch</u> op	D
3. b <u>e</u> t	C	18. fa <u>s</u> t	E
4. g ot	A	19. di <u>sh</u>	E
5. c <u>a</u> p	C	20. we <u>nt</u>	E
6. <u>dr</u> um	D	21. wi <u>n</u>	A
7. bu <u>mp</u>	E	22. <u>f</u> ed	A
8. mu <u>ch</u>	D	23. <u>tr</u> ip	D
9. wi <u>th</u>	E	24. <u>r</u> ub	A
10. ma p	A	25. f <u>i</u> t	C
11. h <u>o</u> p	C		
12. <u>pl</u> an	B		
13. <u>th</u> at	B		
14. <u>sl</u> id	B		
15. m <u>u</u> d	C		