

THE EFFECTIVENESS OF TWO SPELLING APPROACHES
ON VOCABULARY DEVELOPMENT FOR
HISPANIC LEARNERS

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ABSTRACT

The purpose of the study was to evaluate two approaches to teaching spelling and vocabulary to second through fourth graders in two different urban school systems to determine if one program revealed greater growth scores on Tennessee Comprehensive Assessment Program (TCAP) reading components. Research question 1 posited: Does Word Study, a developmental approach to spelling and vocabulary, impact the mastery of specific reading and language arts subtests on the Tennessee Comprehensive Assessment Program (TCAP) for Hispanic English Learners? Five sub-questions assessed whether Hispanic ELs who were taught a developmental approach, using Word Study, achieve better TCAP scores than Hispanic ELs who were not taught spelling and vocabulary with a rigorous developmental approach in:

- a) Content (reading)
- b) Meaning (reading)
- c) Vocabulary
- d) Techniques and Skills
- e) Grammar Conventions

Research question 2 asked: How do teacher beliefs and attitudes toward spelling and vocabulary instruction affect Hispanic ELs' reading achievement? Sub-questions were: Do teachers in either or both districts believe spelling and vocabulary programs were implemented with fidelity? Do teacher beliefs and practices vary between the two spelling and vocabulary

programs? How many times per week did spelling and vocabulary instruction occur in each district? Did teachers differentiate spelling and vocabulary instruction for Hispanic ELs in each district?

Both quantitative and qualitative approaches were implemented. For research question 1, both districts demonstrated positive growth gains in Content and Meaning. District A students showed gains in Vocabulary. Techniques and Skills performance revealed a decline for District A while District B showed gains. District A Hispanic ELs demonstrated growth gains on Grammar Conventions.

The qualitative analysis revealed that teachers in both District A (56%) and District B (58%) were positive in their attitudes toward the value of explicitly teaching spelling and vocabulary. District A teachers revealed challenges with implementing a new approach while teachers in District B used the adopted basal reading program.

Implications for practice were identified from both research-based programs. Educators in Tennessee can build on the foundation of effective reading, spelling, and vocabulary strategies examined in this study to ensure success for EL students, as well as all struggling or reluctant readers.

DEDICATION

This dissertation is dedicated to my extremely supportive and understanding parents, Johney and Etta Belle Crittenden. They, along with my sisters and brothers-in-law, Freda and Richard Hodges and Carolyn and Stephen Eagleton, have encouraged me throughout this journey. I thank God for giving me a family whose prayers and encouragement have strengthened me during the challenges of this endeavor.

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CHAPTER 1

INTRODUCTION

Literacy is one of the critical areas of need in our educational system, in Tennessee, as well as across the nation. Reading, the main focus of this area of instruction, involves more than just decoding print and deriving meaning; spelling and vocabulary are two additional pieces of the literacy puzzle. Al Otaiba and Hosp (2010) reference Perfetti's (1997) definition of spelling as "a linguistic skill that involves 'encoding' linguistic forms into written form. The linguistic units-phonological strings, morphemes, and words are provided by the spoken language" (p.3). Spelling accuracy is a very basic, essential skill and is an important and established part of the curriculum (Allred, 1984). Significant strides have been made in understanding the instructional importance of spelling. One such understanding is the synchrony among reading, writing, and spelling development; the way a student spells words provides vital information about how the student reads words (Ness, 2010). Yet, in recent years spelling has not been a focal point of classroom instruction (Gentry, 2004). Johnston's (2001) research revealed that among the 42 teachers in her study, 73% reported that spelling was not adequately supported in the elementary curriculum. While 27% believed spelling to be adequately supported, most teachers (74%) expressed concern that students today are inferior spellers in comparison to those from past years.

Spelling instruction has traditionally been a part of the language arts curriculum, with very little thought given to the importance of instructional practices used for teaching spelling.

For some teachers it has been easy to plan, as the word lists are almost always given in the teacher's edition of the basal reading series, or in a spelling book, which contains a list of words for each week of the school year. Daily exercises were also planned for all students, with little or no differentiation to accommodate various instructional levels.

Johnston's (2001) research disclosed three basic instructional approaches to teaching spelling. The approaches Johnston found were the use of a published series; a combination approach embracing a published series alternated with a word list of content words; or an alternative approach. For the alternative approach the teachers did not use any published series but rather created their own unique weekly lists of spelling words for their own class.

Massengill's (2006) research, however, affirmed prior research findings from Schlagel (2002) that the traditional method of teaching spelling (rote memorization) is ineffective as the sole approach to spelling instruction. Massengill (2006) further noted the findings of Bear, Invernizzi, Templeton, and Johnston (2004) in research using Interactive Word Study. In that study learners were required to develop skills in examining, discriminating, and critically judging speech sounds, word structures, spelling patterns, and word meanings for spelling acquisition.

While the learners in the Bear et al. (2004) study were adults, the findings revealed that the adults moved through the same stages of spelling development, as well as types of errors, that younger students experience. The five stages of spelling development that progress through the three tiers of English orthography (alphabet, pattern, and meaning) are emergent, letter name, within word, syllables and affixes, and derivational relations. As students received instruction related to their particular stage of development, the active manipulation of words in the Word Study approach assisted them in internalizing and generalizing different word features. Bear et

al. (2004) judged this approach as superior to rote memorization since spelling is an active process instead of a passive one (Massengill, 2006).

Spelling is crucial to students' reading and writing success because "Spelling errors make text more difficult to read" (Graham et al., 2008, p. 796). Comprehension is challenging when traditional spelling is not used and writers, whether students, businessmen/women, or professionals from various walks of life, depend on correct spelling in any text used for communication purposes. Poor spellers are very limited in their ability to communicate, since spelling plays a critical role in reading and writing fluency, as well as in developing capacity within students to become articulate speakers (Gentry, 2004). There is evidence of a lack of mastery of spelling for native English speakers, leading to the assumption that English orthography is also a challenge for English Language (EL) students, ultimately leading to difficulty in reading, spelling and vocabulary.

Janzen (2008) reported the 2000 dropout rate for Latino/Latina students was 22.4%. This group represents the majority of English Learners and represents a dropout rate of more than twice the national average. Janzen further elaborated on the National Assessment of Educational Progress (NAEP) report, which revealed that a large majority of ELs scored below the basic level in the major content areas of reading, writing, history, science, and mathematics. These results were consistent at all grade levels tested 4th, 8th, and 12th (National Center for Education Statistics, 2005). Ensuring reading, spelling, and vocabulary success for students leads to success for English Learners (Proctor, Carlo, August, & Snow, 2005). In illustration, Fender's (2008) research showed moderate to strong correlations between English word recognition, spelling, and reading comprehension for English Learners, just as those which exist for native, first language (L1) English speakers.

Background to the Problem

Myriad research studies have underscored the relationship of spelling and reading based on the common foundation of orthographic knowledge (Bear & Templeton, 1998; Cunningham & Cunningham, 1992; Ganske, 1999; Massengill, 2006; Templeton & Morris, 2001). Over the years the knowledge that spelling plays an important role in reading and writing, as well as vocabulary growth has prompted research into integrating instruction in the areas of spelling, phonics, and vocabulary to support reading instruction (Bear & Templeton, 1998). Each area of instruction, however, requires specific attention. For example, Graves (2006) makes a clear distinction between vocabulary instruction and spelling instruction: vocabulary instruction should be focused on words that students do not know, while spelling instruction needs to focus on words students know and use.

Possibly as a result of instant messaging, text messaging, and informal spelling used by contemporary students, spelling is becoming more of a concern for educators. These concerns relate to younger students such as those in middle school, as opposed to the high school or college students who typically have a stronger foundation in traditional spelling (Shaw, Carlson, & Waxman, 2007). For texting or instant messaging purposes, users often misspell or shorten words within the messages, a process which then becomes part of their academic writing (Shaw et al., 2007). Additionally most students now rely on the assistance of spell check and other technological tools as a replacement for acquiring spelling skills of their own (Sweeny, 2010). Sweeny further noted that despite the widespread use of technology, skills traditionally taught in language arts must still be taught and used if students are going to be able to possess and apply good communication skills throughout life. As noted by Shaw et al. (2007), “Even though

teachers understand that shortened writing has become common and acceptable in youth's culture, they are responsible to teach today's youth the art of writing as well as overcome the language of instant and text messaging" (p. 58).

Spelling Instruction for English Learners

English Learners (ELs) need specific spelling instruction as they learn to read and write in English. August et al. (2006) referenced a large, persistent gap in reading performance for students who are ELs as opposed to those who are monolingual English-speaking students. The gap identified is representative of both intellectual and practical challenges. The 2004 NAEP reading test showed a 22-29 point scale score advantage for students living in homes where English is the only spoken language. "...Closing this gap has high priority if U.S. education is to reduce inequities in access to opportunities that are contingent upon successful school achievement" (August, et al., 2006, p. 352). Fender's (2008) research affirmed the difficulty presented by this gap when he stated, "...ESL (English as a Second Language) learners from different L1 backgrounds may have distinctly different problems and consequently different needs in developing ESL word recognition and spelling skills" (Fender, 2008, p. 24).

Al Otaiba and Hosp (2010) concurred with previous research in the National Center for Education Statistics (2009) by stating that "over 40% of the fourth graders who attend school in America cannot read beyond a basic level, and this percentage is far greater among children who are from minority backgrounds and among children living in poverty" (p. 3). Fender further noted (2008), "There is now a considerable amount of research in the past 20 years showing that L1 word recognition skills interact with and influence the emergence of L2 word recognition skills" (p.34). Dixon, Zhao, and Joshi's (2010) study of bilingual and multilingual children's

lexical representations revealed a pattern of errors that impact students' literacy acquisition, whether the languages were acquired consecutively or simultaneously (p 212). Sparks, Patton, Ganschow, Humbach, and Javorsky (2008) specified "Related research on the processes by which students learn to read their L1 provides potential insights that assist our understanding about the role of decoding in learning to read an L2" (p. 163).

Students who are taught spelling through a developmental approach (i.e., Word Study) examine the alphabetic layers, patterns, and meanings of words in the English language (Williams et al., 2009). This approach to teaching students to spell involves assessment to determine the strengths and needs of the student in spelling and vocabulary for appropriate instructional planning. Ganske (1999) referenced Henderson's (1990) previous studies that revealed five stages of spelling development to determine areas of weakness, then targeting these areas for instruction. This approach is more individualized, therefore allowing teachers to see where gaps exist in orthographic knowledge.

The use of rote memorization, usually accompanied by a published spelling book, has the limitation of teaching only a finite number of words, while also promoting more generalizable pattern knowledge (Morris et al., 1995). This approach tends to support beliefs of early theorists who purported that spelling is learned one word at a time. A second group of theorists advocated that children build a mental model of the English spelling system as they learn words grouped by patterns. While patterns are one of the five stages of spelling development, the patterns in the published spelling series are more generalized and finite (Morris et al., 1995). This approach to teaching EL students to spell would limit the decoding and other processes used to acquire spelling and other literacy skills in a new language.

Statement of the Problem

With the strong instructional attention on reading emphasized through the No Child Left Behind (No Child Left Behind [NCLB], 2003) and now the Race To the Top (RTTT) initiative (Race to the Top Act, 2011), reading achievement and improvement have been and continue to be the primary instructional focus in elementary schools. In fact, “Many elementary teachers and parents view spelling proficiency as a cornerstone of academic success because it links to advances in general literacy” (Alderman & Green, 2011, p. 599).

In Tennessee the robust focus on reading comes from both the U. S. Department of Education and the Tennessee Department of Education. When considering the importance of reading and writing, Terry (2006) stated, “While all children must learn to negotiate mismatches between speech and print in order to become good readers and writers, this process may be particularly problematic for children whose spoken language differs substantially from standard written forms” (p. 907). This would include children, as well as adults, who are learning English as a second language who have to overcome any residual phonemes related to their native language.

Reading scores in Tennessee for 2007 fell below the national average for fourth and eighth graders when compared to the National Assessment of Educational Progress (NAEP) report (Lee, J., Grigg, W., & Donohue, P., 2007). Although there is no subtest for spelling given by NAEP, recommendations of the National Research Council (1998) include addressing spelling in the areas of both reading and writing in the earliest grades.

Various instructional models for spelling instruction have been studied and later implemented in school systems, yet students and adults continue to struggle with spelling (Alderman & Green, 2011; Gentry, 2004; Graham, et al., 2008; Massengill, 2006). The problem

to be investigated in this study is whether the use of Word Study as a model of instruction had a discernible impact upon English Learners' reading, spelling, sight vocabulary, and overall reading comprehension.

Purpose of the Study

The first goal of this study will be to analyze whether results of the use of Word Study in an urban school district comprised mostly of students from low socioeconomic status, a high percentage of English language learners and a very fluid enrollment has promoted growth in reading, spelling, and vocabulary. Graham et al. (2008) referenced earlier studies espousing the importance of spelling to foundational reading skills such as word attack and word recognition. Ganske (1999) affirmed earlier studies in describing orthographic knowledge (spelling) as the driving force for effective reading and writing skills for students. Word Study is used, in conjunction with formative assessment, to teach spelling and sight vocabulary.

The second goal of this study will be to show the importance of the continual use of formative assessment to plan for and guide learning for students, especially in the areas of reading and spelling. The data provided through this study will accentuate successful strategies and practices that will become useful to other educators who struggle with teaching spelling in their classrooms.

Rationale

“Historically, research on spelling has lagged behind research on reading. Even though the gap has narrowed in recent years, we still know less about learners' processes of spelling than reading” (Massengill, 2006, p. 421). The lack of emphasis on spelling research has most likely

caused educators to push this subject area to the back burner for instructional purposes.

Alderman and Green (2011) referenced studies of U.S. educators' beliefs about spelling stating, "Some U.S. educators believe that spelling is the most poorly taught subject and requires more direct instruction. Others suggest that inconsistency of spelling instruction is of national concern" (p. 599).

Research in the area of spelling has been ongoing for many years. Yet this research has not been at the forefront, as has research in other curricula areas such as reading. In the late 1960s and early 1970s researchers began to identify spelling as a developmental process, rather than one of rote memorization (Templeton & Morris, 2000). This concept of spelling being more than just memorizing words created a paradigm shift for educators. When research began to introduce the idea of spelling as a developmental process, educators were then challenged to meet individual developmental needs to provide spelling instruction at the appropriate level. During this time the correlation of spelling to reading and writing also became an important issue.

Research on the basic foundational components of reading emphasized the importance of both phonemic awareness and phonics. The ability of students to connect sounds to written representations (graphemes) is essential for reading and writing. Casbergue and Plauche (2005) affirmed earlier research that determined the role of the teacher in providing guidance as students applied known letter sounds when spelling words. This is especially important as earlier studies revealed a strong statistical relationship between phonemic awareness and success in early stages of reading and writing, with a special emphasis on phoneme segmentation tasks as predictors of success in early reading and spelling (Ball & Blachman, 1991). Individualizing instruction in reading has been a practice for years. Now, with research supporting developmental spelling,

educators are challenged to use formative assessment as an ongoing blueprint for instruction and assessment of students' spelling. Using available data to guide instruction provides support for each student's individual growth at varying levels of knowledge and skill they each possessed.

Significance of the Study

This study is significant because it has produced results to provide educators with resources and strategies shown to be successful with students from various demographic backgrounds, including English Learners. The influx of ELs in urban school systems in Tennessee emphasizes the need for more empirical research in the area of spelling, reading, and vocabulary acquisition for these students.

There have been various schools of thought concerning spelling development by researchers throughout the years. The current belief that spelling development is usually characterized as proceeding in incremental phases has been investigated as to impact on reading and vocabulary for EL students. This belief is based on phases of growth by the type of decoding or encoding a child displays as reflected in a review of earlier research by Sharp, Sinatra, and Reynolds (2008). Word Study is based upon a conceptual framework of the emerging orthographic understanding and word knowledge of children. Ganske (1999) affirmed earlier research supporting the argument that spelling is developmental and stressed the importance of teaching and studying words in ways that emphasize their invariant features. Teachers must have knowledge of their students' background understanding of words if they are to be proactive in providing developmentally appropriate instruction in spelling (Ganske, 1999). The goal of Ganske's study was to assist both teachers and researchers through the development of a measure of orthographic knowledge. The purpose of this instrument was assist in spelling

specific orthographic features as well as entire words, while assuring it was grounded in developmental spelling theory referenced in earlier studies.

The formative assessment Developmental Spelling Analysis (DSA) is focused on the last four of five stages of spelling development as described in previous studies. These stages are preliterate, letter name, within-word pattern, syllable juncture, and derivational constancy. “The DSA was designed with two components: (a) a brief Screening Inventory and (b) parallel Feature Inventories” (Ganske, 1999, p. 46). The Screening Inventory evaluates a child’s stage of development. Earlier studies identified the stage of development at which a child uses but confuses orthographic features, as the stage that would prove instructional intervention most profitable. The Feature Inventories were created to facilitate appropriate instruction to cover the spelling stages of letter name, within-word pattern, syllable juncture, and derivational constancy using four comprehensive lists.

Creating the lists for Word Study assists spelling, phonics, and vocabulary instruction. Students learn to examine shades of sound, structure, and meaning of words. They also learn processes and strategies for examining and thinking about the words they read and write on a daily basis. Research by Bear and Templeton (1998) examined the three layers of information represented by spelling. These layers are alphabetic (matching letters/sounds in a left-to-right fashion), pattern (more complex grouping of letters) and meaning (consistent spelling of meaning elements despite sound change within words)

Understanding Word Study and DSA has had the potential of aiding educators and the researcher in analyzing and using data to enhance instruction for all students, especially ELs. Recommendations for next steps in further study have also been provided.

Research Questions and Hypotheses

The following general research questions were addressed in this study:

General Research Question One: Does Word Study, a developmental approach to spelling and vocabulary, impact the mastery of specific reading and language arts subtests on the Tennessee Comprehensive Assessment Program (TCAP) for Hispanic English Learners?

Specific Research Question One: Do Hispanic ELs who were taught a developmental approach, using Word Study, achieve better TCAP scores in Content (reading) than Hispanic ELs who were not taught spelling with a rigorous developmental approach?

Hypothesis: Hispanic ELs who experienced instruction with a developmental Word Study approach perform better on TCAP *Content* (reading) subtests than Hispanic ELs who did not experience a developmental approach to spelling.

Null Hypothesis: There is no difference in TCAP *Content* (reading) scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach and Hispanic ELs who were not taught spelling and vocabulary with a developmental approach.

Specific Research Question Two: Do Hispanic ELs who were taught a developmental approach using Word Study achieve better TCAP scores on the *Meaning* (reading) subtest than Hispanic ELs who were not taught spelling and vocabulary with a rigorous developmental approach?

Hypothesis: Hispanic ELs who experienced instruction with a developmental Word Study approach perform better on TCAP *Meaning* (reading) subtests than Hispanic ELs who did not experience a developmental approach to spelling.

Null Hypothesis: There is no difference in TCAP *Meaning* (reading) scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach and Hispanic ELs who were not taught spelling and vocabulary without a developmental approach.

Specific Research Question Three: Do Hispanic ELs who were taught a developmental approach to spelling and vocabulary using Word Study achieve better TCAP scores on the *Vocabulary* subtest than Hispanic ELs who were not taught spelling and vocabulary with a developmental approach?

Hypothesis: Hispanic ELs who had Word Study, a developmental approach to spelling and vocabulary, do better on TCAP *Vocabulary* tests than Hispanic ELs who did not experience a developmental approach to spelling and vocabulary, Word Study.

Null Hypothesis: There is no difference in *Vocabulary* TCAP scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach, Word Study, and Hispanic ELs who were not taught spelling and vocabulary with a developmental approach.

Specific Research Question Four: Do Hispanic ELs who were taught a developmental approach to spelling and vocabulary using Word Study achieve better *Techniques and Skills* TCAP scores than Hispanic ELs who were not taught spelling and vocabulary with a developmental approach?

Hypothesis: Hispanic ELs who had Word Study, a developmental approach to spelling and vocabulary, have higher achievement scores in TCAP *Techniques and Skills* than Hispanic ELs who did not experience a developmental approach to spelling and vocabulary.

Null Hypothesis: There is no difference in *Techniques and Skills* TCAP scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach, Word Study, and Hispanic ELs who were not taught a developmental approach to spelling and vocabulary.

Specific Research Question Five: Do Hispanic ELs who were taught a developmental approach to spelling and vocabulary using Word Study achieve better *Grammar Conventions* TCAP scores than Hispanic ELs who were not taught spelling and vocabulary with a developmental approach?

Hypothesis: Hispanic ELs who had Word Study, a developmental approach to spelling and vocabulary, have higher achievement scores in TCAP *Grammar Conventions* than Hispanic ELs who did not experience a developmental approach to spelling and vocabulary.

Null Hypothesis: There is no difference in *Grammar Conventions* TCAP scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach, Word Study and Hispanic ELs who were not taught a developmental approach to spelling and vocabulary.

General Research Question Two: How do teacher beliefs and attitudes toward spelling and vocabulary instruction affect Hispanic ELs' reading achievement?

Specific Research Question One: Do teachers in either or both districts believe spelling and vocabulary programs were implemented with fidelity?

Specific Research Question Two: Do teacher beliefs and practices vary between the two spelling and vocabulary programs?

Specific Research Question Three: How many times per week did spelling and vocabulary instruction occur in each district?

Specific Research Question Four: Did teachers differentiate spelling and vocabulary instruction for Hispanic ELs in each district?

Delimitations of the Study

This study was delimited by the following:

- The study will focused on third grade, baseline scores in comparison to fourth grade scores for state achievement testing (TCAP).
- The study focused only on schools in an urban setting.
- The study focused on teacher preparation, professional development, and experience for this project.

Limitations of the Study

- This study measured effectiveness of the Word Study program in an urban school system. The results were affected by method of instruction used by experienced and inexperienced teachers.
- The teacher focus groups measured attitudes of teachers toward the Word Study program. It is a self-report which did not allow for control of the honesty of the answers provided by the participants.
- The focus groups were voluntary, which may have resulted in a small number of participants.

- The sample was a convenience sample drawn from two urban school systems in the state of Tennessee. Generalizing results to the entire population of urban schools was difficult due to the differences in demographics of urban schools nationwide.

Definitions of Terms

The following terms and definitions applied to this study:

- Derivation: The formation of a word or term from another, or from a base form.
- Derivational relations spelling stage: The last stage of spelling development in which spellers learn about derivational relationships preserved in the spelling of words. Derivational refers to (a) the use of affixes to create new words from existing words and (b) creating a new word from its historical origin.
- Developmental Spelling Analysis (DSA): Developmental Spelling Analysis is an assessment program used in conjunction with Word Study for providing guidance for instruction in spelling.
- Digital native: Those born in the 1980s or later who have a greater understanding of digital technology than other, older adults.
- EL (English Learner): A student whose first language is not English.
- Emergent spelling stage: The earliest stage of literacy development from birth to beginning reading.
- Grapheme: Any of a set of written symbols, letters, or combinations of letters that represent the same sound.
- Homonym: A word that is spelled and sounds like another word, but has a different meaning.

- Homophone: A word that sounds like another word, but is spelled differently and has a different meaning.
- Letter name spelling stage: The second stage of spelling development where students are able to correctly represent beginning, middle, and ending sounds of words with phonetic choices.
- Lexical level: Linguistic processing at the word level
- Morphemic awareness: Understanding the smallest meaningful element of speech or writing.
- National Assessment of Educational Progress (NAEP): A group that conducts assessments of students chosen randomly across the United States for the purpose of reporting and comparing reading, math, science and writing scores.
- National Research Council: A group organized by the National Academy of Sciences in 1916 to associate the broad community of science and technology with the Academy's purposes of furthering knowledge and advising the federal government.
- Orthography: The study of symbols used in writing language; correct or standardized spelling of established words in a language.
- Phonemic awareness: Understanding the smallest units of speech that distinguish one word from another.
- Phonemic segmentation: Dividing words into each phonemic sound.
- Phonics: A way of teaching reading and spelling using sound-symbol relationships.
- Prefix: A linguistic element that is not an independent word but is attached to the beginning of words to modify their meaning.

- Qualitative spelling inventories: A list of words used to determine the needs of instruction for individual students.
- Sight Vocabulary: The recognition of a word that does not require decoding or analysis for identification.
- Spelling: The forming of words with letters in a conventionally accepted order.
- Sublexical level: Includes two morphological sublexical level and nonmorphological sublexical level, involving oral language tasks of morphological analogy, phonological awareness, syllable segmentation, nonsense word reading and rhymes.
- Suffix: A letter or group of letters added at the end of a word or word part to form another word.
- Supralexical level: Oral and written processing beyond the word level.
- Syllables and affixes spelling stage: Intermediate readers are usually at this fourth stage of spelling development that involves spelling transitions from one syllable to the next.
- TCAP: Tennessee Comprehensive Assessment Program consisting of a series of criterion-referenced tests specific to Tennessee curriculum.
- Vocabulary: All the words used by or known to a particular person or group, or contained in a language as a whole.
- Within word pattern spelling stage: The third stage of spelling development that coincides with transitional literacy development. At this stage basic letter-sound correspondences have been mastered, but students in this stage have difficulty with long vowel patterns, and silent letters.
- Word Study: An instructional approach to teach reading, spelling, and vocabulary through the examination of words and parts of words to determine meaning.

CHAPTER 2

REVIEW OF THE LITERATURE

The relationship of spelling and vocabulary instruction to reading success has been a part of ongoing research for many years. The importance of spelling is affirmed by Templeton and Morris (2000) as they stated, “Linguists have long known that a spelling or orthographic system has to do more than simply record speech sounds” (p.526). Further explanation is found when considering the English language consists of a rich assimilation of other languages occurring over 1,500 years. Moats’ (2005) research affirmed earlier studies by Ehri (2000) when she noted that, “Research has shown that learning to spell and learning to read rely on much of the same underlying knowledge...and, not surprisingly, that spelling instruction can be designed to help children better understand that key knowledge, resulting in better reading” (p. 12). To understand the history, progression, and impact of spelling upon reading and vocabulary development, and in particular the development of the Word Study and the DSA assessment program, the following literature review was conducted.

Historical Background of Spelling Research

Templeton and Morris (2000) provided historical context for the teaching of spelling in the U.S. educational system. In the early days of the nation’s history educators placed emphasis on teaching students to read and spell almost simultaneously. The Alphabet Method was employed to teach students the letters of the alphabet along with a short-vowel syllabarium. This

method continued until the Blue-Backed Speller by Webster became useful as a spelling and reading instructional tool.

Spelling research has been ongoing for decades (Alderman & Green, 2011; Gentry, 2004; Templeton & Morris, 2001; Ganske, 1999; Templeton, 1986; Horn & Spencer, 1940). Allred (1984) discussed early spelling instruction in terms of its importance to communication skills. New memorization strategies were introduced in the 1930s and 1940s to assist students in preparation for weekly spelling tests. Allred's research looked at the two major methods of testing spelling, the handwritten spelling test and the proofreading-type spelling test, usually used on standardized achievement tests (p. 298). Guza and McLaughlin (1987) compared results of students' daily versus weekly spelling test scores. This study was based on earlier research studies, which resulted in improved spelling scores for children who were provided daily tests over a portion of the words on their weekly lists. This procedure was effective for all students, but particularly so for the low-ability group who showed the most dramatic positive results. Both of these methods of spelling assessment are still used today.

During the 1990s the use of spelling books became a subject of controversy. Morris, Blanton, Blanton, and Perney (1995) reviewed earlier studies of approaches to teaching spelling and its importance in the classroom. Traditionalists argued for continued use of spelling books in elementary grades, while a growing faction, known as reformers, viewed spelling through the eyes of writing, a skill to be taught incidentally and informally to students as they developed writing skills. Third and fifth grade students who received spelling instruction through a formal spelling program, including student books and a teacher's edition, were tested at the beginning of the school year and found to have retained a good amount of spelling knowledge as they began the new grade-level spelling book. While spelling book proponents argued their programs taught

spelling patterns and principles that generalize to a large number of words, those who opposed the use of spelling books maintained the argument that such programs only taught a finite number of words, many of which students had already learned through reading and language arts instruction.

Later, during the 20th century, spelling and writing were taught as separate disciplines, and by the latter part of the century spelling instruction in schools had deteriorated. By the 1980s and 1990s the interest of educators in teaching spelling focused more on spelling as a tool for writing, instead of its former purpose as a form of orthographic knowledge and indicator of overall literacy competence.

A systematic curriculum for phonics and spelling must, first and foremost, reflect the structure of the writing system itself. For this reason, early research on spelling focused on chronicling English orthography from a historical perspective (Craigie, 1927; Scragg, 1974; Vallins, 1973). This early work by language historians described the evolution of English spelling from the first written artifacts found in seventh-century monasteries to modern English as we spell it today. (Invernizzi & Hayes, 2004, p. 217)

Hanna, Hanna, Hodges, and Rudorf (1966) made the first generalizations regarding the consistency of the system of English orthography. Moats (2005) affirmed their research findings by stating “The spelling of words in English is more regular and pattern-based than commonly believed” (p.14). Further, use of sound-symbol correspondence to spell was acknowledged as a basis for spelling when considering the pattern complexity that occurs within the English language, along with the influences and application of word meaning and origin (Moats, 2005). Instruction in spelling began to be organized around spelling patterns instead of a contrived list of words for memorization (Massengill, 2006).

Chomsky (1970) and Read (1971) began working on studies involving children’s invented spellings (Gentry, 2004; Graham et al., 2008). These studies led to the conclusion that

young children have an innate ability to learn language as they construct and use their knowledge about letter-sound relationships. These studies sparked interest and investigation into many spelling-related issues, to the point that the concept of developmental stage theory became the basis for the conceptual framework of the Word Study approach to teaching spelling, along with intervention as needed (Massengill, 2006). According to Ganske (1999), Read's (1971) research prompted Beers (1980) and Beers and Henderson (Beers & Henderson, 1977) to take research involving children's invented spellings a step further. These studies looked at changes in spelling progression as students moved through various stages toward acquisition of more traditional spelling in their writing. Later studies affirmed Ganske's research when related to students' reading (Foorman & Petscher, 2010).

Teacher Preparation

American schools are becoming more diverse each year. Byrnes and Kiger (1998) stated "The varieties of language backgrounds that characterize students in contemporary society pose an unprecedented challenge to teachers" (p.26). There were many issues considered by Byrnes and Kiger, among them the issue of teacher preparation, or lack thereof. Among the issues listed were teachers' lack of skills, knowledge, and experience in working with language-minority students, even when teachers displayed positive attitudes.

Janzen (2008) discussed possible causes for academic failure of ELs. She reported that the causes were multidimensional and ranged from poor institutional practices to students' weak levels of first-language literacy skills to poverty. Though these were all challenges within themselves, Janzen affirmed earlier research by Byrnes and Kiger by maintaining a critical component of the issue was a lack of teachers who were prepared to work with nonnative

English speakers. Her study stated a revealing statistic, “A recent national survey determined that a high proportion of teachers, 41%, have ELLs in their classes, but only 12.5% of those teachers had had 8 or more hours of training in the previous three years on how to assist them” (National Center for Education Statistics, as cited by Janzen, 2008). Furthermore, Janzen reported that another national study, regarding the preparation of teachers who work with ELs, revealed that a very small number of teacher education programs required any preparation for mainstream teachers on working with EL students. Janzen quoted the National Clearinghouse for English Language Acquisition FAQ (August 2006a) as stating “It should also be noted that, as of 2004, only 24 states had legal requirements that teachers in English as a Second Language (ESL) classrooms must be specially certified to work with ELLs” (p. 1011). Earlier research by Byrnes and Kiger (1998) stated, “With inadequate or incorrect knowledge, teachers cannot engage in best practice in the classroom” (p.30).

For all students, whether EL or native English speakers, Johnston (2001) supported the idea that pre-service and in-service teachers should not only know how students develop as spellers, but they should also know how to analyze and use assessment to plan instruction at the appropriate learning level just as educators have done for reading instruction (p.153). Al Otaiba and Hosp (2010) reiterated the importance of making educational decisions based on assessment results. These decisions are not just best practice, but recent updates of federal law require a focus on accountability and data based decision making.

A plethora of research is related to teacher preparation for teaching spelling to all students, both EL and native English speakers. Systematic spelling instruction throughout the elementary grades has continued to be a need as established in much of the research (Gentry, 2004; Johnston, 2001; Newlands, 2011).

Research-Based Instruction

Research conducted in reading has also impacted what has been learned about spelling instruction. Barger (2009) emphasized earlier research regarding the use of qualitative spelling inventories, which consist of a series of word lists (Templeton & Morris, 1999) based on grade level (Schlagel, 1989) or one list that features several developmental levels. These studies guided spelling instruction and also supported the use of differentiation within that instruction. Research further illuminated this point by showing how undifferentiated, whole group instruction was ineffective in meeting the needs of low-achieving spellers (Invernizzi & Hayes, 2004). The studies referenced above supported the concept of developmental progression in spelling acquisition that has yielded important information for educators throughout the last few decades. The results of Ness's (2010) research affirmed earlier research that discovered in almost every class there was a range of three grade levels in spelling. Ness further upheld earlier research noting, "Though small-group instruction responsive to the needs of diverse learners has become common practice in many elementary schools, differentiated instruction in phonics and spelling instruction is not yet readily embraced" (p. 121).

Bowers, Kirby, and Deacon (2010) presented findings from a small body of research that investigated effects of morphological instruction on reading, spelling, and vocabulary acquisition. The meta-analysis synthesized results gathered after morphological interventions were studied for effects of instruction with struggling readers, those with spelling challenges and those with undifferentiated participants. Bowers et al. referenced a 2008 report by Reed at the conclusion of a 10 year morphological intervention longitudinal study with kindergarten through 12th grade students. The Reed study resulted in wide ranges of effect sizes, which showed

stronger effects associated with instruction focused on root (base) words compared to only affixes. Reading and reading-related outcomes produced medium effect sizes, while at the same time being larger than for other intervention studies.

Recommendations of the Bowers et al. study included integrated morphological instruction that should be individualized to the developmental stage of each student and should include a focus of instruction in root (base) words. This instruction should concentrate on providing opportunities for guided application of morphological knowledge at the lexical and supralexical levels, which have shown to work in reverse to strengthen sublexical skills. Bowers et al. concluded that the greatest effects of morphological instruction were found at the sublexical morphological level. Furthermore, morphological instruction integrated with other literacy instruction was particularly effective with less able and younger readers. The research by Bowers et al. affirmed earlier studies by Hauerwas and Walker (2004) regarding the importance of systematic exposure to oral language awareness for children with underdeveloped phonemic and morphological awareness skills. Instruction in word analysis and contextual application must have the necessary foundation of oral language, which requires phonemic and morphological understanding. “Morphemes are characterized by consistent spelling patterns but are also associated with pronunciations and meanings, and they may also mark grammatical cues” (Bowers, et al., 2010, p. 169).

Cover-Copy-Compose

Erion, Davenport, Rodax, Scholl, and Hardy (2009) reviewed studies on spelling interventions. “Better results were obtained when interventions included explicit instruction with multiple practice opportunities and immediate corrective feedback” (p.320). The cover-copy-

compose (CCC) practice embraces components of instructional strategies found to produce positive results. The identified strategies were designed to be used with students with learning disabilities, but Erion et al. also identified low SES, Caucasian, below grade-level students for inclusion in the study.

The core components of CCC are self-evaluation and self-correction. It was noted that a number of studies affirmed that error identification and immediacy of error correction are critical to achieving accurate spelling. This strategy in general is successful for acquisition and retention of spelling words. Later, Mann, Bushell, and Morris (2010) added that the use of sounding out in conjunction with CCC that showed positive results for young students. It was recommended that a phonological awareness assessment be administered to address gaps in basic letter-sound correspondence for improvement of the efficacy of the strategy.

EL Instruction

Janzen (2008) noted important aspects of effective teaching strategies disclosed in a study of elementary-middle school students in a school whose population served a majority of Mexican-American students. She stated that effective teaching for these students should include creating a classroom culture that mirrors the students' own cultures. According to her observations, another important aspect is for teachers to utilize the students' first language to empower them in the classroom. One caution from Janzen was for teachers to have a critical perspective on culture, understanding both positive aspects, as well as those that may not promote academic success, such as attitudes about gender roles. According to a study included in Janzen's research, one method used in another school for changing attitudes about gender roles was a collaborative project employing mathematics, writing, and storytelling to reach a

goal of building student self-esteem through expanding the range of available role models. This was accomplished as teachers shared biographical stories about successful Latina mathematicians and engineers. Discussion supported the teachers' understanding of students' prior knowledge and noted positive changes over the next year as students revealed an awareness of professional or technical careers for women.

Literacy development for EL students requires understanding the differences in learning in the first versus the second language. August et al. (2006), found empirical evidence to support earlier studies that showed, while most children need explicit instruction in various aspects of reading acquisition, EL students had a greater need for explicit instruction. The observation of variability in first and second language dependence on the quality of language environment was made. Literacy learning in the second language is strongly dependent on the oral base on which literacy is built, thus is also more variable across learners and is potentially influenced by reading skills in the first language. The depth of English orthography is a complication for EL students, especially those whose first language is one of the Romance languages such as Spanish.

Other studies of effective strategies for use with EL students involved a more narrow focus, such as vocabulary instruction. Focusing on fewer words while using context, checking for L1 cognates, and analyzing morphological structure for cues to meaning was emphasized as an important step for EL students (Carlo et al., 2004). Recommendations of this research included introduction of novel words in the context of interesting texts, along with activities that encouraged learners to manipulate and analyze word meaning. This study promoted repeated exposures to the novel words through writing and spelling them multiple times. Teachers were admonished to assist students in noting how the word meaning varies as a function of content, as well as providing strategies for inferring the meaning of unknown words (p. 205).

Overlapping Waves Perspective

Sharp et al. (2008) extended thoughts presented by Rieben and Saada-Robert (1997) regarding incremental development strategies children may choose to apply to spelling. This research supported former studies by Rittle-Johnson and Siegler (1999), which found the concept of the overlapping waves as involving the choice of strategy, depends on the situation or condition in which the spelling test is presented. The researchers found that students often used multiple strategies, sometimes for spelling even just a single word. This perspective supported the concept that incremental spelling growth occurs as children make adaptive choices among a variety of strategies for use in spelling words, which usually fit into one of two different categories: (a) retrieval or (b) backup strategies (Sharp et al., 2008). The use of the backup strategy (e.g., sounding out the word or using a rule) is more accurate, but slower than retrieval, which suggests that spelling is a problem-solving endeavor. Sharp et al. (2008) agreed with earlier research that the children were adaptive in their selection of strategies because they used more strategies on more difficult words, even though these spelling strategies did not always yield correct spellings. Sharp et al. (2008) noted research studies by Rittle-Johnson and Siegler (1999) which revealed the concept behind the retrieval strategy as being the fact that children retrieve a word faster than using a backup strategy, but slower than if the word is automatically known.

In addition, this research showed an overall pattern of change a gradual progression toward more effective strategy use over time, by acknowledging that spelling is developmental, while at the same time the use of strategies as a viable instructional tool for children. Analyzing

spelling errors fostered the belief that stages of spelling development can be enhanced and progress achieved through the use of strategies (Sharp, et al., 2008).

Newlands (2011) reiterated Templeton's (2002) study by stating, "Spelling is not just memory work; it is a process of conceptual development" (p.531), which further supported the importance of individualization for spelling instruction. It was further noted by Newlands that commercial spelling programs leave little room for differences in students' spelling and vocabulary unique needs. Aside from recommending knowing the most common spelling generalizations, Newlands also encouraged students to observe various spelling patterns for affixes, to learn which strategies to apply and to analyze errors to learn how to correct them. A teacher's challenge is to construct instructional lessons to support the retention of information related to conventional spelling. These instructional strategies could include various mnemonic devices as well as challenges to use other creative strategies to create relationships between letters and words.

Representational-Redescription Model

Critten, Pine, and Steffler (2007) conducted research on the spelling development of younger students to evaluate whether that development could be understood in the context of Karmiloff-Smith's (1992) representational-redescription (RR) model. This model describes how knowledge is represented in the cognitive system and then changes with development. Steffler (2001) conducted research that provided evidence of spelling progression from a visually based, phonological level to a higher order morphological level. Later both aspects resulted in correct spelling production. The representational-redescription (RR) model consists of four stages: Implicit level, Explicit Level 1 (E1), Explicit Level 2 (E2), and Explicit Level 3 (E3).

The Implicit level, as described by Critten, Pine and Steffler, consists of basic task success or “behavioral mastery” an absence of conscious access to knowledge and a lack of ability to express knowledge or to analyze it within its component parts. The Explicit Level 1 (E1) is the beginning of explicit knowledge representations. At this point the student begins to move from external data to internal representational change, abstracting a theory, absence of conscious access to knowledge or verbal report, and a gradual decrease in performance demonstrated by a U-shaped developmental curve as performance drops even though understanding has increased. E1 is the stage that may explain the overgeneralization errors described in earlier research as the morphological rules of –ed endings that have been overused. The Explicit Level 2 (E2) includes characteristics of achievement of balances as the representations held internally become integrated with external environmental data, and improved student performance with understanding. At this point a student’s overgeneralization errors will decrease while the morphological rules will more regularly be correctly applied. The final level is Explicit Level 3 (E3), which includes characteristics of explicit knowledge representations that can be accessed and verbalized on a conscious level as well as the flexibility and creativity in using and applying knowledge to other small domains.

After conducting two experiments, Critten, Pine, and Steffler concluded the phonological to morphological development of spelling in young children could be understood in the context of the RR model. This resulted in a better understanding of the nature of the representations children access as they develop. There was a prevalence of multiple representations with younger children, which supported findings of earlier research that children fall back onto earlier representations, use unsuccessful spelling strategies, and overgeneralized the –ed past-tense when faced with a difficult problem.

Word Study

A major component of developmental spelling is found in the research-based instructional approach known as Word Study. Developmental spelling is based on the three layers of information represented by components of spelling (Bear & Templeton, 1998; Invernizzi & Hayes, 2004; Templeton, 1986; Templeton & Morris, 2000). Ness (2010) posited an integrated approach to Word Study instruction concentrated on spelling, meaning, and grammar connections to build vocabulary and orthographic knowledge for students. Templeton and Morris (2000) pointed to research during the second half of the 20th century that affirmed that spelling of the English language was logical and rule-based when patterns of letters and their representation of sound were analyzed as opposed to a letter/sound analysis. Layers of spelling development include the alphabetic layer, the pattern layer and the meaning layer. Understanding and use of all three layers in Word Study has proved to be critical for student success as readers, writers, and spellers.

Ness (2010) acknowledged the importance of earlier research underlying the developmental layers of learning to spell. According to Ness's study, the alphabetic layer is the basic foundational layer where very young students make one-to-one linear, left-to-right correspondences between sound and letter. This stage of spelling development is the Emergent Spelling stage, progressing into the Letter Name Spelling stage. At this stage of development, children begin to incorporate this strategy as they write and "invent" spellings of words using the letters and sounds acquired at this point. Children's early spellings usually are devoid of vowel markers since these children have not yet had formal literacy instruction.

The second layer of developmental word study is the pattern layer. This layer is where the learner begins to understand that groups of letters, often patterns, are representative of sounds within a syllable. In earlier studies Templeton and Morris (2000) pointed to the fact that this layer functions both within and between syllables. The vowel/consonant/silent e (VCe) pattern for within syllable structure in words such as *like* and the vowel/consonant/consonant/vowel (VCCV) juncture pattern found between syllables as in words like *willow*, or the vowel/consonant/vowel (VCV) pattern in words such as *pilot* are all examples of the pattern layer. At this stage of spelling (Within Word Pattern) students have the ability to spell short vowels and begin to experiment with long vowel words. Ness acknowledged the transitional reading stage, which is approaching fluency. As students become more fluent in their reading they begin to move toward automaticity in applying patterns and chunks, especially long vowel patterns. "Results from the younger students indicate that vowels are more difficult to learn to spell than consonants, past tense -ed is acquired over time, and plural -s is relatively easy for children to represent" (Foorman & Petscher, 2010, p. 8). As application of long vowels occurs, there is often confusion between the more frequently used patterns and those less frequently used, such as diphthongs, ambiguous vowels, and r-influenced vowels. Student use of the pattern layer grows more sophisticated as spellers begin to apply affixes and use syllables to spell.

Researchers have identified the final layer as the meaning layer (Ness, 2010). At this point students, eighth grade and above, understand the relationship that words with similar meanings usually have similar spelling, despite changes in sound. As Ness emphasized, this is the stage of development where small units of meaning, morphemes, are preserved through

spelling. Greek and Latin roots carry meaning and impact a word's spelling. This final spelling development stage is referred to as the derivational relations stage.

Templeton and Morris (2000) stated, "Significantly, the meaning layer will very often override the other layers of information" (p.527). It is further noted that within the meaning layer there is more consistency in the spelling of the parts of words even if a change in pronunciation occurs. "Syllables and affixes spellers begin to draw connections between spelling and meaning as they add prefixes and suffixes to base words" (Ness, 2010, p. 116).

As Word Study continues, students become more sophisticated in their abilities as they move through the stages of spelling knowledge and its system (Bear & Templeton, 1998; Invernizzi & Hayes, 2004). Ness (2010) posed the idea that Word Study instruction must have the critical component of meaningful connections to authentic texts. To successfully use Word Study teachers must know the background knowledge and experience of their students, to successfully plan developmentally appropriate instruction (Cunningham & Cunningham, 1992; Ganske, 1999).

One important consideration was that there are instructional practices that affect the implementation of the model or program used with students. Johnston addressed three instructional approaches used by teachers who employ a formal spelling program. These instructional approaches are (1) use of a published series (2) a combination approach and (3) an alternative approach.

A published spelling program usually contains word lists that share some common spelling features. Along with these lists are activities to reinforce the specific rules of spelling being taught that week. As Newlands (2011) pointed out, "Teachers who use commercial spelling programs often teach the weekly word lists with the entire class. One drawback with

this approach is that consideration is not given to the differences in students' spelling ability, literacy skills, and vocabulary development" (p.531).

To counteract the problem with a "one size fits all" approach of a published spelling program, some classroom teachers choose to use the combination approach. As described by Johnston (2001), this approach is a combination of the published spelling series, along with words chosen by the teacher. These words could be content-specific words from the classroom word wall or high frequency words used in everyday writing with students. A modification to the combination approach is teaching spelling from the published series' word list one week, then using subject area words the following week.

The combination approach included words from the student's independent cognitive realm (Newlands, 2011). This approach is purported to differentiate and meet individual spelling and writing needs for students.

The alternative approach consisted of a list of words created by the teacher for the entire class. This approach can be managed by allowing students to choose their own spelling words from a list created by the entire class. It also can be modified to allow students to have more input by allowing them to choose words to replace any of the listed words they may already know. In some cases, Johnston found teachers who did not create lists but allowed the students to use a variety of sources for creating their own lists. Some chose words from content area themes, while others chose words misspelled in writing, words found in the week's reading materials, or high frequency words or spelling patterns (Johnston, 2001, p. 148).

The Relationships of Phonemic Awareness, Phonics, and Morphology to Spelling

Throughout reading research there has been a connection to spelling as revealed in Moats' (2009) study of the morphophonemic nature of the English alphabetic orthography which maps spellings to speech sounds, though some are complex and variable (Moats, 2009).

Foorman and Petscher (2010) affirmed Moats' study by stating

The consequences of poor spelling are apparent in reading and in writing/ With respect to reading, incomplete orthographic representations impede decoding (Foorman & Francis, 1994); with respect to writing, lack of knowledge of a word's spelling leads to avoidance of words and, hence less lexical diversity (Moats, Foorman, & Taylor, 2006), (Foorman & Petscher, 2010, p. 8).

The National Reading Panel (2000) identified five major foundational components of reading: phonemic awareness, phonics, vocabulary, fluency, and comprehension. The studies conducted and reviewed by the National Reading Panel on the first three components (phonemic awareness, phonics, and vocabulary) have provided strong evidence of a relationship between these components of reading and spelling. Though spelling was not identified as a foundational part of reading, the evidence suggests it is a vital element that assists in supporting reading and writing. "Accurate identification of and discrimination of confusable phonemes and words (Moats, 2000; Scarborough & Brady, 2002) is important for reading and spelling" (Moats, 2009, p. 385). This support begins in the earliest of stages of learning to read and spell (Graham, et. al., 2008).

Phonemic awareness and phonics are very closely related to spelling. To understand the relationship, one must understand the differences in terms. Phonemic awareness refers to the smallest units of sounds in any language. It is critical to build a foundation in phonemic awareness prior to applying the alphabetic code. This is usually accomplished in the very earliest years of schooling, but it can also be applied to adult learners who have poor reading

skills as well. Viise and Austin, (2005) found a strong relationship between phoneme awareness skills and success in the early stages of reading and spelling. Earlier research studies by Nation and Hulme (1997) have found performance on phoneme segmentation tasks to be predictive of success in early stages of reading and spelling. Research by Davidson and Jenkins (1994) encouraged using caution when applying phonemic awareness skills to learning to spell. The choice of phonemic awareness processes should be carefully selected for use in enabling children to apply spelling-to-sound and sound-to-spelling rules.

Hannam, Fraser, and Byrne (2007) found that very young children have difficulty with the stop phonemes, both “voiced” (/b,d, g/) and “voiceless” (/p, t, k/), particularly when they follow the /s/ sound in a word. This can result in phonological ambiguity since phonetic material can be assigned to two different phonemes. Phoneme assignment includes the patterning of sounds in the language as a whole, as well as phonetic assignment. As such, the phonological ambiguity can result in young students misspelling simple words such as “spin” (SBIN). Hannam, et al. brought to light the differences in phonology of children versus that of adults. “Though children aged two and three often have trouble pronouncing s-stop clusters, normal children can do this before entering preschool” (Hannam, Fraser, & Byrne, 2007). This study further stated that children develop phonological concepts based on words and their meanings, followed by a separation of sound and meaning represented in sensitivity to rhyme and other salient phonetic units as with /s/. Later links with orthography are built around morphemic units and their spelling form and subsequently shift to a focus on the speech stream. Finally, alphabetic orthography, which represents structure and relationships to sounds, supports a more mature concept of phonological organization.

Vadasy and Sanders (2010) conducted a study with kindergarten students, some of whom were language minority. Regular classroom instruction, as well as intervention, was administered. Student assessments, pre-and post-tests, revealed growth for the language minority students on receptive vocabulary and alphabets but not on word reading and spelling. Outcomes were beneficial for language minority students' phonological awareness. "Higher amounts of kindergarten classroom phonics time benefits spelling, whereas a double dose of phonics instruction (in the classroom and in a pull-out phonics-based intervention) benefits comprehension" (Vadasy & Sanders, 2010, p. 800).

The teaching of reading through the connection of a written or printed symbol (grapheme) to the sound represented by the grapheme(s) is phonics (Harris & Hodges, 1995). Spelling is related in that we have an alphabetic language.

Phonics and spelling instruction in English requires the teacher to know and explain a multi-layered orthographic system (Moats, 2000; Snow et al., 2005). English orthography represents sounds, syllable patterns, and meaningful word parts (morphemes), as well as the language from which a word originated. Phonic decoding, if properly taught, includes much more than a letter-sound correspondence for each letter of the alphabet. (Moats, 2009, p. 385)

Though there are many combinations of letters that sometimes create one sound, as there are some single letters which denote more than one sound, the relationship still assists students in their endeavors at spelling and writing the English language (Moats, 2009). "To read (and spell), the beginning reader must make use of the alphabetic code" (Ball & Blachman, 1991, p. 51). Terry's (2006) research further examined the relationship of dialect use and spelling skills among children. This research affirmed the importance for all children, regardless of race or ethnicity, learning to recognize and negotiate mismatches between particular speech dialects and print if they are to become good readers and writers. Early instruction is especially important for

children who may experience differences in oral speech production and standard grammatical English, resulting in interference at a more fine-grained level of linguistic knowledge (Terry, 2006).

Bowers, Kirby, and Deacon (2010) reviewed evidence of the impact of morphological instruction on students' literacy acquisition. "Morphology is the conventional system by which the smallest units of meaning, called morphemes (bases, prefixes, and suffixes), combine to form complex words" (p. 144). Beginning readers and writers, who seriously rely on mapping sounds of their spoken language to graphemes or groups of graphemes, often lack understanding of the relationships of phonology, morphology, syntax, and spelling. Spelling is controlled by both morphology and phonology due to the deep orthography of the English language, often referred to as a morphophonological orthography. The depth of English orthography is related to the opaqueness of the correlation between letters and sounds (Foorman & Petscher, 2010). Bowers et al. (2010) revealed in their research a unique variance in vocabulary knowledge and spelling that can be predicted via morphological knowledge at the lexical level. This research revealed children, as young as four years old, have morphological knowledge. By ages five and six, children have exhibited use of morphological cues to influence spelling. Terry's (2006) investigation into the role of inflections and their importance in language use and spelling revealed typically-developing students acquire the ability to represent inflections correctly and consistently by third grade, usually age 8 or 9. Increasing reading fluency, grammatical and orthographic understanding, and classroom instruction fosters skill in applying knowledge of correct usage and spelling of inflections.

It has been suggested in some studies that morphological knowledge in reading increases with age while phonological awareness begins to decrease. Bowers et al. stated this does not always appear in analyses of all studies.

Vocabulary

“Vocabulary is one of the most obvious other areas of literacy instruction to integrate with morphological instruction” (Bowers et al., 2010, p. 172). Learning new words is a key component of reading as identified by the National Reading Panel (2000), but lacks sufficient attention in most classrooms. Studies by Blachowicz and Fisher (2000) affirmed earlier research that identified objectives critical to vocabulary instruction as: (a) independence, (b) specific word learning, and (c) appreciation and enjoyment. Nagy and Scott (2000) reiterated Blachowicz and Fisher in their concerns that vocabulary instruction is in need of change to be aligned with current reading research. “To many, the word *vocabulary* may suggest a reductionist perspective in which words are learned by memorizing short definitions and sentences are understood in a strictly bottom-up fashion by putting together the meanings of individual words—a picture inconsistent with our current understanding of the reading process” (p. 269)

Beck, McKeown, and Kucan (2002) stated, “Indeed, a large vocabulary repertoire facilitates becoming an educated person to the extent that vocabulary knowledge is strongly related to reading proficiency in particular and school achievement in general” as a rationale for rigorous and robust vocabulary instruction in classrooms (p.1). This research points to the importance of a rich verbal instructional environment where there is much attention given to the study of words and their meanings. Beck, et al. stated “Specifically, word knowledge exists not

as a list of discrete items but as networks of words clustered into categories” which then lead into using words appropriately in different contexts and building morphological relationships (p.128).

Bowers and Kirby (in press) pointed to the fact that morphemes are orthographic representations of sublexical and lexical meanings found in multiple words. Bowers and Kirby have affirmed the importance of written morphological instruction to provide a generative component within vocabulary instruction to support transfer to the learning of new words. Vocabulary instruction should include problem-solving tasks requiring students to see and understand the spelling-meaning connections. Blachowicz and Fisher (2000) also encouraged active engagement of students in making these connections, along with mnemonic strategies, use of images and role playing word meaning or the use of reciprocal teaching, which was affirmed in earlier studies to be a tool for learning self-selected vocabulary words and developing comprehension.

The importance of vocabulary instruction and intervention for EL students is a key to reading acquisition. Research conducted by Carlo et al. (2004) employed specific strategies for vocabulary intervention for English only (EO) and EL students. The impetus of this study was to evaluate and close the achievement gap in vocabulary for EL students, particularly Latino children. The study reviewed earlier research and found corroboration that vocabulary is crucial to reading acquisition for all students including EL students. While oral English vocabulary may be acquired through exposure since birth, these students must be provided the skills and strategies for learning words encountered in reading, often not used in spoken language. Incidental acquisition of these words is not a viable option since many of the words in text are unfamiliar and may have ambiguous meaning. Linguistic cues are lacking due to EL students’ weak command of English grammar. Carlo et al. (2004) referenced earlier studies stating,

“Vocabulary instruction for ELLs would ideally combine direct teaching of words with incidental learning fostered by multiple opportunities to encounter novel words in authentic and motivating texts” (p. 191).

Conclusions of the Carlo et al. study confirmed many of the effective vocabulary strategies of recent years are as effective with EL students as with native English speakers. The vocabulary intervention in the Carlo et al. (2004) study enhanced reading comprehension for EL students as for EO students. “The key distinction of the vocabulary training offered here was that teaching new words was subordinated to the goal of teaching about words—various kinds of information about words that could help children figure out word meanings on their own” (p. 205).

Later studies conducted by August et al. (2006) affirmed many of the earlier studies regarding the importance of vocabulary and reading instruction in the child’s first language. The correlation of first language reading skills to second language reading skills is strong, but children must have first language literacy in the skill for the relationship to exist. Acknowledging oral proficiency in the first language is not enough. The research has also affirmed that second-language vocabulary is a predictor of second language reading comprehension, while at the same time influencing reading comprehension indirectly through listening comprehension as well. “It furthermore suggests that intervention research designed to improve reading comprehension outcomes among Spanish-English bilingual children should include robust vocabulary instruction as an integral component” (August, et al., 2006, p. 362). This reiterated that EL students need both direct instruction and incidental learning. Riedel’s (2007) study of the use of Dynamic Indicators of Basic Early Literacy Skills (DIBELS) with young English Learners resulted in concerns regarding the administration of the Oral Reading Fluency test, which

showed ability for decoding words rapidly, but also revealed comprehension of text is often lacking due to vocabulary inadequacies. Strategies for inferring meanings of unfamiliar words through the use of contextual cues, morphological information, cognate knowledge and classroom resources such as dictionaries and glossaries are needed for all learners, including EL students. The English language shares many cognates with Spanish. Recognition of these cognates is dependent on abilities similar to those of recognizing these relationships in Spanish is similar to recognition of morphological relationships in English. Many of these skills are developed after fourth grade (Nagy and Scott, 2000). “Nagy et al. as well as Garcia and Nagy have presented results suggesting the efficacy of teaching native Spanish speakers explicitly about the value of cognates and morphological relationships between Spanish and English” (Carlo, et al., 2004, p. 192).

Gender Differences and Spelling

Studies regarding the issues surrounding gender differences in learning have resulted in a plethora of research. Many studies have focused on curriculum issues, especially those in reading and its related components. Hanson and Zambo (2010) conducted studies of boys and literacy, resulting in affirmation of former studies of the distinct differences between girls’ and boys’ literacy acquisition. Earlier studies affirmed that gender differences do exist, but are usually cultivated as students get older, rather than when they are in the younger grades (Horne, 2007).

Much research has focused on the varied behaviors and learning styles of boys versus girls. These studies pointed to biological differences found in the way the brains of boys process related issues versus the processing of the same related issues for girls. Hansen and Zambo

(2010) directed attention to earlier studies whose authors reported a difference in the number of related neurons in male and female brains. There are more neurons in the female brain, thus verbal tasks are often easier for girls than boys. More estrogen, oxytocin, and dopamine in girls foster compliance within groups and an easiness with connecting with others. For boys, fewer neurons in the related area of the brain, along with more testosterone, support observations of educators and parents that boys are more aggressive and competitive than girls. Horne (2007) spoke to the issue of boys' misbehavior as being related to difficulty in learning to read. In this same study Horne addressed the issue of the disproportionate number of boys in the United States who are referred for special education services, which in reality may be challenges in learning to read and other literacy skills. Hansen and Zambo (2010) cited Brozo's (2002) study of positive male archetypes and how boys can learn pro-social behaviors, develop a more positive idea of manhood, and increase their motivation to read. Earlier research by Rosenblatt (1978) related that students have better reading comprehension when they can relate to the characters, which is affirmed by Hansen and Zambo.

The concept brought to focus in recent years, related to gender differences, suggested very preterm (VPT) and very low birth weight (VLBW) babies often later have difficulty with academic performance, including reading and spelling (Scott, et al. 2011). Brain research related to VPT and VLBW children highlighted very specific potential gender-specific structural differences in the brain, which suggested VPT male babies are particularly vulnerable to brain injury, which may explain gender differences in neurodevelopmental outcomes of boys. Scott, et al., reported studies of significant alteration of the structure-function relationships of the brain and the effects on learning. "Gender-related differences in structural brain development may also account for the significant gender main effect which showed an increased correlation in

females versus males between spelling and GM (grey matter) in the superior frontal gyrus” (Scott, et al., 2011, p. 2690). Scott, et al., further pointed to other factors associated with outcomes of studies of gender differences and academic learning. Socio-economic status, maternal mental health, birth weight, and gestational age are all components of longitudinal studies of gender differences and brain structure.

Gender differences in male versus female engagement in reading and other literacy activities have become evident in very early grades. Cavazos-Kottke (2005) stated, “The problem, as I see it, is not so much that many boys quit reading altogether, but rather that they engage in literacy practices that many teachers and classrooms are reluctant to embrace” (p. 181). Methods of literacy instruction appealing to boys are often not employed in the classroom.

The self-selected reading (S-SR) approach employed by Cavazos-Kottke (2005) in his classroom affected change in the motivation of boys to read. Strategies used to engage and motivate boys were to read required reading from various genres throughout the year, assigning points to different kinds of reading materials while requiring a predetermined number of points during each grading period. “Increasing students’ freedom of choice for S-SR had a snowball effect on their motivation which spilled over into other areas of the curriculum” (p. 183). Choice is powerful for students, both male and female. Allowing students to make decisions about their reading may help them see the connection between what is done in school and real life.

Technology and Spelling

Most children who are native to the United States, as well as those from other countries who are in our schools today are extremely literate in technology. Lewis and Fabos (2005) reported that technology has always been a part of literacy instruction. Every tool from stylus to

printing press was considered “technology” when first introduced. As these various tools were more commonly used, they were not considered “technology” as when they were new (p. 475).

The current information and communication technologies (ICTs) are fundamentally changing the ways in which youth today read, write, and communicate. Their writing uses the mediums of instant messaging (IM), text messaging (or texting), Twitter, and e-mail, as well as shared electronic documents and postings on blogs and social networking sites. The writing itself does not always follow traditional conventions, featuring instead images, audio recordings, and a form of shorthand in which vowels and punctuation are irrelevant and time-consuming to use (Sweeny, 2010, p. 121).

“Digital natives” (Prensky, 2001) is the inclusive term describing students who were born within the age of technology. Students today have different ways of reading and writing through a technology that is natural to them, but may not be so familiar or comfortable to adults, including their teachers (Lewis & Fabos, 2005). As students become more literate in the newer concept of an expanding literacy that includes technology, skills in writing and communicating will become even more critical. Sweeney (2010) noted the study of communication signs and symbols (semiotics) is changing as a result of technology and newer literacies.

Summation of Literature Review

A number of points can readily be drawn from a review of the literature. First, spelling has historically been taught through many different instructional approaches. The most widely used method for many years was the traditional spelling list given to students on Monday, with a pre-test, and then a post-test on Friday. This strategy is still used in some classrooms today.

Secondly, the need for children and adults to possess adequate spelling skills, if they are to be successful readers and writers is still being recognized as a concern (Gentry, 2006). The English language consists of many layers, which present challenges when it comes to spelling;

however, these layers also provide a rich vocabulary. When taught the origins, meanings, and related words with similar meanings and spellings, children can acquire principles for determining spellings of various words to help them in both reading and writing (Moats, 2005).

Thirdly, rote memorization was the primary strategy used for spelling instruction for numerous years, but it did not work for many learners. Through years of research (Bear & Templeton, 1998; Cunningham & Cunningham, 1992; Fender, 2008) it is now known that spelling correlates to the way children learn other subjects, especially reading. Teachers have to know students' background knowledge and level of understanding in order to provide the most effective instruction. This knowledge is acquired through assessment data to ensure planning and instruction can address students' needs. An understanding of different levels of literacy development will assist educators in planning are more apt to provide support for both spelling and reading acquisition.

The implementation of the No Child Left Behind law brought new challenges requiring educators to meet the needs for special education students, English language learners, and other students who have varying abilities and needs, with similarly rigorous standards to those for the general population of students. As more research studies are conducted, this researcher hopes that best practices and strategies for teaching spelling, reading, and vocabulary will be developed to provide support and resources to educators throughout the state of Tennessee. Educators cannot afford to overlook the importance of spelling, especially during the early years of school. "Knowledge of words' spelling is clearly relevant to successful text reading efficiency and reading comprehension" (Foorman & Petscher, 2010). Additionally, the researcher hopes administrators will encourage and support teachers of reading and spelling by providing training

and resources in the use of best practices for instruction. Spelling is a key component of reading and writing for all students' use in communication.

The tenor of much recent research, therefore, reflects the conclusion that if systematic spelling instruction drives orthographic knowledge that is important to both spelling and word recognition—and indirectly, to comprehension (Perfetti, 1985; Stanovich & Cunningham, 1993)—then attention to spelling should not be left to an ‘as needed’ basis (Templeton & Morris, 2000).

An educated society will only be achieved if educators acquire and use the most effective resources and instructional strategies for teaching students to effectively communicate through reading and writing. This will be dependent upon underlying support of strong, daily spelling and vocabulary classroom instruction.

CHAPTER 3

METHODOLOGY OF THE STUDY

Introduction

This chapter will describe and explain the research design, sample studied, instrumentation procedures used, and data that were analyzed. Approval of the Institutional Review Board (IRB) at the University of Tennessee at Chattanooga was acquired prior to accessing any archived data collected from each of the two school districts to be studied. This approval ensured the protection of human subjects.

The purpose of the current study was to determine whether differences exist between TCAP scores for Hispanic ELs having been taught using the Word Study approach to spelling and vocabulary and Hispanic ELs who were instructed with an approach other than Word Study. It was the intent of the researcher to determine the approach that promotes success for Hispanic EL students' as determined through specific reporting categories on the TCAP assessment.

Research Design

This study employed a non-experimental, mixed methods design (Creswell, 2007). Quantitative data were comprised of TCAP scores for Hispanic EL fourth graders during the spring 2008 assessment from two urban public school districts in Tennessee. Sanders, Saxton, and Horn (1997) explained the use of the Tennessee Value-Added Assessment System (TVAAS) for measuring and showing gains in academic growth. According to Sanders, Saxton, and Horn

(1997), the TVAAS was developed to provide unbiased estimates of the effectiveness of schools, school systems, and teachers on the academic growth of students. A primary purpose of the TVAAS is the ability to show summative evaluation of effectiveness and also provide a vital data source for formative evaluation purposes.

This study made use of historical archived data from two school districts in Tennessee. District A selected 30 pilot schools to implement Word Study, a developmental approach to spelling and vocabulary, beginning in the 2005-2006 academic year. District B used spelling and vocabulary instruction couched in McGraw-Hill Publisher's basal reading program during the specified academic year. Quantitative data were available from both districts and consisted of TCAP scores in Hispanic ELs' on the subtests of *Content, Meaning, Vocabulary, Techniques and Skills*, and *Grammar Conventions*. The qualitative aspects of the study design employed a grounded theory approach (Creswell, 2007). Creswell described grounded theory as generating or discovering a theory based on participants who have experienced the process. In this study the experience is the application of Word Study in classrooms with Hispanic EL students. The qualitative portion of the study collected responses from participants in focus groups consisting of teachers and reading specialists from both Districts A and B who were teaching these students during the 2005-2008 school years.

Description of the Population and Sample

The participants in the study were cluster samples of schools representative of Hispanic EL students and teachers in two Tennessee urban school districts. Hispanic EL students were selected from those integrated into general classrooms, (not in pullout classes) in District A. Hispanic EL students in District B were selected by matching similar school demographics

including socioeconomic status, ethnicity, language, gender, and classroom conditions, with District A.

During 2005-2006, 30 schools were selected to pilot Word Study in District A. Students who were in second grade in 2005-2006 were fourth graders in 2007-2008, thus having been instructed with the Word Study approach for three years. Students in District B will have had a variety of approaches to spelling and vocabulary instruction during the same period.

In 2008 District A had 137 PK-12 schools, with a total population of 70,140 students and a total Hispanic population of 10,399 (14.2%). District A was comprised of 35,745 (48.9%) females and 37,312 (51.1%) males. District A had 75 elementary schools of which 30 were selected to be elementary pilot schools. These selected schools had a total population of 12,790 (18.2%), which included a total of 2,479 (3%) Hispanic students. The identified schools had 6,326 (9.0%) females and 6,681 (9.5%) males of the total population. The percentage of economically disadvantaged students in the 30 pilot schools for District A was 79.2%.

District B had 76 PK-12 schools, with a total population of 40,985 of which 1,854 (4.6%) were Hispanic students. Within the 76 PK-12 schools in District B, 36 (47%) were elementary schools serving PK to grade 5. Two of the 36 elementary schools had no Hispanic population, thus only 34 elementary schools were a part of the study. Of the selected 34 elementary schools 59.3% were economically disadvantaged.

The population for the study was narrowed to only fourth grade Hispanic students in the selected elementary schools in each district. For this study District A had approximately 153 identified Hispanic EL fourth graders selected from the 30 pilot schools, of these 61 were females and 92 males. District B had approximately 65 Hispanic EL fourth grade students, of these 26 females and 39 males were involved in this study.

For the qualitative aspects of the mixed methods design, a convenience sample of teachers (Creswell, 2007) was included in the qualitative portion of this study. This sample consisted of those who taught second, third, or fourth grades during the years of 2005-2008 in their respective public school systems and who agreed to participate in the study. Although participation was voluntary, the researcher hoped information collected was representative of teachers who actively teach reading, spelling, and vocabulary to Hispanic EL students, as well as those who implemented Word Study and other chosen spelling and vocabulary programs in the recent past.

Instrumentation

The research instruments contained both quantitative and qualitative elements. The TCAP (Tennessee Department of Education, 2012) results were used for the quantitative data aspect of the study. The TCAP assessment is a summative assessment administered annually each spring to third through eighth grade students throughout the state of Tennessee. The TCAP measures English/Language Arts, Mathematics, Science, and Social Studies at each of these grade levels. For purposes of this study five of the seven reporting categories within the third and fourth grades English/Language Arts component were used. This section will provide the information needed for determining growth in the following components: *Content* (reading), *Meaning* (reading), *Vocabulary*, *Techniques and Skills*, and *Grammar Conventions*. Each area is described below.

Content (reading) determines acquisition of reading skills such as identifying forms of text, identifying setting, characters, and plot. This category also involves sequencing and assessing the problem and solution within a reading selection. *Meaning* (reading) assesses

ability to state the main idea, identify cause and effect, determine fact versus opinion, infer from text and to think clearly about what is being read. Scores on these two reporting categories were examined to determine reading acquisition.

Vocabulary is a reporting category on the TCAP assessment that was used for determining growth in word meaning and usage for students. This category assesses rhyming words, sounds within words, root words and inflections, word meanings with various inflections, word meaning within the context of prefixes or suffixes, and usage of antonyms and synonyms. Word meaning as determined through context clues and correct usage of multiple meaning words is also a component of this category.

Techniques and Skills were used to determine growth in spelling, along with other skills related to spelling. This category assesses recognition of parts of a book, the support of illustrations to text, usage of text features, identification of reliable sources of information, recognizing correctly or incorrectly spelled words, and alphabetical order.

Grammar Conventions was used to view spelling acquisition as this category includes assessment of such skills as correct usage of nouns, verbs, and adjectives.

Grammar Conventions includes correct formation of contractions and plurals, along with recognition of usage errors within context of double negatives, homonyms, and homophones.

The qualitative aspect of the mixed methods approach was used to secure a comprehensive view of the implementation of Word Study (Ganske, 2000). Qualitative data were collected via the focus group technique. Two focus groups, one per district, consisted of eight to 12 classroom teachers and reading coaches who answered a prepared set of questions to supply the best information resulting from the interactions and dialogue within the group (Creswell, 2007). These questions elicited information regarding the beliefs and attitudes of

teachers toward their own instruction of spelling and vocabulary. Other information garnered from the questions of the focus group session concentrated on professional development provided for the respective programs, as well as fidelity of implementation in the classroom. Focus group results will be analyzed to provide the qualitative portion of the study. This information consisted of participants' perceptions and beliefs about the fidelity of implementation of both spelling and vocabulary approaches (See Appendix A for focus questions).

Research Questions and Hypotheses

The following general research questions were addressed in this study:

General Research Question One: Does Word Study, a developmental approach to spelling and vocabulary, impact the mastery of specific reading and language arts subtests on the Tennessee Comprehensive Assessment Program (TCAP) for Hispanic English Learners?

Specific Research Question One: Do Hispanic ELs who were taught a developmental approach, using Word Study, have better TCAP scores in *Content* (reading) than Hispanic ELs who were not taught spelling with a rigorous developmental approach?

Hypothesis: Hispanic ELs who experienced instruction with a developmental Word Study approach perform better on TCAP *Content* (reading) subtests than Hispanic ELs who did not experience a developmental approach to spelling.

Null Hypothesis: There is no difference in TCAP *Content* (reading) scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach and Hispanic ELs who were not taught spelling and vocabulary with a developmental approach.

Specific Research Question Two: Do Hispanic ELs who were taught a developmental approach, using Word Study, have better TCAP scores on the *Meaning* (reading) subtest than Hispanic ELs who were not taught spelling and vocabulary with a rigorous developmental approach?

Hypothesis: Hispanic ELs who experienced instruction with a developmental Word Study approach perform better on TCAP *Meaning* (reading) subtests than Hispanic ELs who did not experience a developmental approach to spelling.

Null Hypothesis: There is no difference in TCAP *Meaning* (reading) scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach and Hispanic ELs who were not taught spelling and vocabulary without a developmental approach.

Specific Research Question Three: Do Hispanic ELs who were taught a developmental approach to spelling and vocabulary, Word Study, have better TCAP scores on the *Vocabulary* subtest than Hispanic ELs who were not taught spelling and vocabulary with a developmental approach?

Hypothesis: Hispanic ELs who had Word Study, a developmental approach to spelling and vocabulary, do better on TCAP *Vocabulary* tests than Hispanic ELs who did not experience a developmental approach to spelling and vocabulary, Word Study.

Null Hypothesis: There is no difference in *Vocabulary* TCAP scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach, Word Study, and Hispanic ELs who were not taught spelling and vocabulary with a developmental approach.

Specific Research Question Four: Do Hispanic ELs who were taught a developmental approach to spelling and vocabulary, Word Study, have better *Techniques and Skills* TCAP scores

than Hispanic ELs who were not taught spelling and vocabulary with a developmental approach?

Hypothesis: Hispanic ELs who had Word Study, a developmental approach to spelling and vocabulary, have higher, achievement scores in TCAP *Techniques and Skills* than Hispanic ELs who did not experience a developmental approach to spelling and vocabulary.

Null Hypothesis: There is no difference in *Techniques and Skills* TCAP scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach, Word Study, and Hispanic ELs who were not taught a developmental approach to spelling and vocabulary.

Specific Research Question Five: Do Hispanic ELs who were taught a developmental approach to spelling and vocabulary, Word Study, have better *Grammar Conventions* TCAP scores than Hispanic ELs who were not taught spelling and vocabulary with a developmental approach?

Hypothesis: Hispanic ELs who had Word Study, a developmental approach to spelling and vocabulary, have higher, achievement scores in TCAP *Grammar Conventions* than Hispanic ELs who did not experience a developmental approach to spelling and vocabulary.

Null Hypothesis: There is no difference in *Grammar Conventions* TCAP scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach, Word Study, and Hispanic ELs who were not taught a developmental approach to spelling and vocabulary.

General Research Question Two: How do teacher beliefs and attitudes toward spelling and vocabulary instruction affect Hispanic ELs' reading achievement?

Specific Research Question One: Do teachers in either or both districts believe spelling and vocabulary programs were implemented with fidelity?

Specific Research Question Two: Do teacher beliefs and practices vary between the two spelling and vocabulary programs?

Specific Research Question Three: How many times per week did spelling and vocabulary instruction occur in each district?

Specific Research Question Four: Did teachers differentiate spelling and vocabulary instruction for Hispanic ELs in each district?

Procedure

Permission to conduct the study was obtained from the Institutional Review Board (IRB) at the University of Tennessee at Chattanooga. IRB approval, certifying that the research protected the rights of students whose tests scores were involved in the study was received. Data were collected from the identified school systems' analysts after approval was given.

Data from 2008 fourth grade TCAP assessment were retrieved from existing files housed at the Tennessee Department of Education and coded for analysis. All identified students were assigned a number for purposes of analyzing test score data. For example, District A students' data were identified beginning with A001, A002, etc. District B students' data were assigned numbers using the same format. Once identified the following information for each student was recorded and placed into an Excel file: student number code, gender, the percent accuracy of TCAP scores for 2007 and TCAP scores for 2008 for all subtest areas. The percent accuracy for

each student in each area for 2007 was subtracted from the percent accuracy for 2008. The result (a measure of gain in relative standing) was used as the data to assess progress between the two groups of students, those taught by Word Study and those taught using other spelling and vocabulary program methods. Means and standard deviations of percent accuracy were used to describe the data.

The data gathered through qualitative means were analyzed by techniques utilizing categorization and coding, while also being examined for pattern analysis and summary of response types including frequencies and emergence of themes. Teachers from both districts will be invited via a personal telephone call or email to participate in focus groups conducted by a trained examiner regarding professional development and implementation in both districts related to the use of Word Study in District A and the McGraw-Hill reading basal conducted by a trained examiner. McGraw-Hill reading basal was the published program used in District B. Each session lasted approximately 1 hour. Consent forms (see Appendix B) were signed prior to beginning the sessions. Questions for these focus groups also gathered qualitative information regarding specific instructional methods used to teach spelling to early elementary students. The teacher focus groups provided evidence of implementation of this program as it is designed, along with teacher attitudes and preparation for teaching spelling and vocabulary in one urban district while the same information from the comparison group yielded similar evidence. Responses were recorded, transcribed, and analyzed for perception of quality of professional development and implementation of the program using part or all of the various components. Data gathered from focus groups of teacher participants were coded, using an open coding process then an axial coding process, and examined to estimate the fidelity of treatment and will

be analyzed through categorization and coding of responses to determine patterns and frequencies of responses and to identify emergence of themes.

CHAPTER 4

PRESENTATION OF THE DATA AND RESULTS

The purpose of this study was to evaluate two approaches to spelling and vocabulary instruction provided to Hispanic English Learners to determine if District A's approach made a significant difference in reading acquisition versus that of District B. The intended goal of the study was to identify spelling and vocabulary instructional approaches that demonstrated a significantly positive difference in TCAP reading proficiency levels for the identified population.

To address General Research Question One, it was necessary to look at five reading TCAP reporting categories for subtests within the area of reading. Inspection of retrievable data revealed test results were not available in scaled scores, or NCEs, thus it was decided the best approach, given the data available, was to look for percentage growth for each category. This procedure was determined to be the most appropriate as the number of items for reporting categories between years of test administration were not equal and required an approach to ensure reliable results.

Although the initial goal of this study was to determine if students who were taught with Word Study showed differences in fourth grade TCAP scores compared to scores of those who were not instructed in Word Study, Levene's Test for Equality of Variances (Hinkle, et al., 2003) precluded statistical comparison of the two school districts. That is, non-equality of variance precluded the planned cross-system comparison. Growth comparisons were conducted within each district, rather than between the two districts. Thus, while the researcher could not directly

compare the two systems and conduct explicit tests of the hypotheses, gains within systems were noted and then non-statistically contrasted across systems. These contrasts are discussed to demonstrate where potential differences between systems may exist.

Research Questions and Data Analysis

Research Question One

Does Word Study, a developmental approach to spelling and vocabulary, impact the mastery of specific reading and language arts subtests on the Tennessee Comprehensive Assessment Program (TCAP) for Hispanic English Learners?

Specific Research Question One

Do Hispanic ELs who were taught a developmental approach, using Word Study, have better TCAP scores in *Content* (reading) than Hispanic ELs who were not taught spelling with a rigorous developmental approach?

Null Hypothesis: There is no difference in TCAP *Content* (reading) scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach and Hispanic ELs who were not taught spelling and vocabulary with a developmental approach.

In the 2008 TCAP administration, *Content* (reading) for Hispanic EL students in District A ($M = 49.42$, $SD=17.01$) saw a significantly high percentage growth (see Table 4.1 below).

Table 4.1 Reading Content Descriptive Statistics for District A

	N	Mean	Std. Deviation	Std. Error Mean
Correct Content Year 2007	153	38.12	13.10	1.06
% Correct Content Year 2008	153	49.42	17.01	1.37

A paired samples *t*-test was conducted to compare percentage growth in reading *Content* TCAP scores for District A between test administration years 2007 and 2008. For District A Hispanic ELs showed positive gains in growth in reading *Content* ($M = -11.31$, $SD = 16.24$). The percentage growth for reading *Content* between 2007 and 2008 students was significant [$t(152) = -8.61$, $p < .000$]. The 99% confidence level between the mean differences of the two test administrations was 13.90 to 8.71 (see Table 4.2 below).

4.2 Paired Differences for Content (Reading) for District A

		99% Confidence Interval of the Difference							
		Mean	Std. Dev.	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
District A	% Correct Content 2007-08	11.31	16.24	1.31	14.73	7.88	8.61	152	.000

In the 2008 TCAP administration, reading *Content* for Hispanic EL students in District B ($M = 68.69$, $SD = 17.84$) also saw a significantly high percentage growth (see Table 4.3 below).

Table 4.3 Content (Reading) Descriptive Statistics for Districts B

	N	Mean	Std. Deviation	Std. Error Mean
Correct Content Year 2007	65	59.12	21.21	2.63
% Correct Content Year 2008	65	68.69	17.84	2.21

District B Hispanic EL students also showed positive percentage growth in reading *Content* ($M= 9.57, SD=22.83$). The growth in percentage points between the 2007 and 2008 years of test administration was significant [$t(64) = 3.38, p <.001$]. The 99% confidence level between the mean differences of the two test administrations was 15.23 and 3.91 (see Table 4.4 below).

Table 4.4 Paired Differences for Content (Reading) for District B

		99% Confidence Interval of the Difference							
		Mean	Std. Dev.	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
District B	% Correct Content 2007-08	9.57	22.84	2.83	15.23	3.91	3.38	64	.001

For Specific Research Question One there was not enough evidence to support the claim that ELs who were taught a developmental approach, Word Study, performed better on the TCAP in reading *Content* than Hispanic ELs who were not taught with a

rigorous developmental approach. While a direct comparison is not possible, both groups demonstrated similar mean percentage score growth.

Specific Research Question Two

Do Hispanic ELs who were taught a developmental approach, using Word Study, have better TCAP scores on the *Meaning* (reading) subtest than Hispanic ELs who were not taught spelling and vocabulary with a rigorous developmental approach?

Null Hypothesis: There is no difference in TCAP *Meaning* (reading) scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach and Hispanic ELs who were not taught spelling and vocabulary without a developmental approach.

In reading *Meaning* for the 2008 TCAP test, the Hispanic EL students in District A ($M = 44.98, SD=18.67$) revealed growth between 2007 and 2008. See Table 4.5 below.

Table 4.5 Reading Meaning Descriptive Statistics for Districts A

	Groups by District	N	Mean	Std. Deviation	Std. Error Mean
% Correct Meaning Year 2007	District A	153	42.17	16.89	1.37
% Correct Meaning Year 2008	District A	153	44.98	18.67	1.51

A paired samples *t*-test was conducted to compare percentage growth in reading *Meaning* TCAP scores for District A between test administration years 2007 and 2008.

For District A Hispanic ELs showed small gains in growth in reading *Meaning* ($M= 2.81$, $SD= 16.38$). The percentage growth for reading *Meaning* between 2007 and 2008 students was not significant [$t(152) = 2.12$, $p < .035$]. The 99% confidence level between the mean differences of the two test administrations was 5.43 to .19 (see Table 4.6 below).

4.6 Paired Differences for Reading Meaning for District A

		99% Confidence Interval of the Difference							
		Mean	Std. Dev.	Std. Error Mean	Lower	Upper	t	df	Sig. (2- tailed)
District A	% Correct Rdg Meaning 2007-08	2.81	16.38	1.33	5.43	.19	2.12	152	.035

In the 2008 TCAP administration, reading *Meaning* for Hispanic EL students in District B ($M = 72.71$, $SD=20.94$) saw a significantly high percentage growth (see Table 4.7 below).

Table 4.7 Reading Meaning Descriptive Statistics for District B

	N	Mean	Std. Deviation	Std. Error Mean
% Correct Reading. Meaning Year 2007	65	50.25	22.27	2.76
% Correct Reading Meaning Year 2008	65	72.71	20.94	2.60

District B Hispanic EL students showed positive percentage growth in reading *Meaning* ($M= 22.46, SD=22.81$). The growth in percentage points between the 2007 and 2008 years of test administration was significant [$t(64) = 7.94, p <.000$]. The 99% confidence level between the mean differences of the two test administrations was 28.11 and 16.81 (see Table 4.8 below).

Table 4.8 Paired Differences for Reading Meaning for District B

		Mean	Std. Dev.	Std. Error Mean	99% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
District B	% Correct Rdg Meaning 2007-08	22.46	22.81	2.83	28.11	16.81	7.94	64	.000

For specific Research Questions Two there was not enough evidence to support the claim that ELs who were taught a developmental approach, Word Study, performed better on the TCAP in reading *Meaning*. Hispanic ELs who were not taught spelling with a rigorous developmental approach did improve. While a direct comparison is not possible, Group B demonstrated better mean percentage score growth.

Specific Research Question Three

Do Hispanic ELs who were taught a developmental approach to spelling and vocabulary, Word Study, have better TCAP scores on the *Vocabulary* subtest than Hispanic ELs who were not taught spelling and vocabulary with a developmental approach?

Null Hypothesis: There is no difference in *Vocabulary* TCAP scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach, Word Study, and Hispanic ELs who were not taught spelling and vocabulary with a developmental approach.

In *Vocabulary* for the 2008 TCAP test, the Hispanic EL students in District A ($M = 55.36, SD=22.21$) saw significantly high percentage growth. See Table 4.9 below.

Table 4.9 Vocabulary Descriptive Statistics for Districts A

	Groups by District	N	Mean	Std. Deviation	Std. Error Mean
% Correct Vocabulary Year 2007	District A	153	45.18	16.94	1.37
% Correct Vocabulary Year 2008	District A	153	55.36	22.21	1.80

A paired samples *t*-test was conducted to compare percentage growth in *Vocabulary* TCAP scores for District A between test administration years 2007 and 2008. For District A Hispanic ELs showed positive gains in growth in *Vocabulary* ($M= -10.18, SD= 19.04$). The percentage growth for *Vocabulary* between 2007 and 2008 students was significant [$t(152) =6.62, p < .000$]. The 99% confidence level between the mean differences of the two test administrations was -13.22 to -7.14 (see Table 4.10 below).

Table 4.10 Paired Differences for Vocabulary for District A

				99% Confidence Interval of the Difference					
		Mean	Std. Dev.	Std. Error Mean	Lower	Upper	t	df	Sig. (2- tailed)
District A	% Correct Vocabulary 2007-08	10.18	19.04	1.54	13.22	7.149	6.61	152	.000

In *Vocabulary* for the 2008 TCAP test, the Hispanic EL students in District B ($M= 77.85, SD=18.50$) did not see significant growth on the administration of the *Vocabulary* component of the TCAP. See Table 4.11 below.

Table 4.11 Vocabulary Descriptive Statistics for Districts B

	Groups by District	N	Mean	Std. Deviation	Std. Error Mean
% Correct Vocabulary Year 2007	District A	65	74.11	16.94	2.46
% Correct Vocabulary Year 2008	District A	65	77.85	18.50	2.29

District B Hispanic EL students also did not show positive percentage growth in *Vocabulary* ($M= -3.74, SD=16.41$). The growth in percentage points between the 2007 and 2008 years of test administration was not significant [$t(64) = -1.84, p <.071$]. The 99% confidence level between the mean differences of the two test administrations was 7.80 and .33 (see Table 4.12 below).

Table 4.12 Paired Differences for Vocabulary for District B

				99% Confidence Interval of the Difference					
		Mean	Std. Dev.	Std. Error Mean	Lower	Upper	t	df	Sig. (2- tailed)
District B	% Correct Vocabulary 2007-08	3.74	16.41	2.04	9.14	1.66	1.84	64	.071

For Specific Research Question Three there was not enough evidence to directly support the claim that Hispanic ELs who were taught a developmental approach, Word Study, performed better on the TCAP reading *Vocabulary*. Hispanic ELs who were taught spelling and vocabulary with a rigorous developmental approach did improve those who were not taught with a rigorous developmental approach failed to show a significant gain. While a direct comparison is not possible, Group A demonstrated better mean percentage score growth.

Specific Research Question Four

Do Hispanic ELs who were taught a developmental approach to spelling and vocabulary, Word Study, have better *Techniques and Skills* TCAP scores than Hispanic ELs who were not taught spelling and vocabulary with a developmental approach?

Null Hypothesis: There is no difference in *Techniques and Skills* TCAP scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach, Word Study, and Hispanic ELs who were not taught a developmental approach to spelling and vocabulary.

In *Techniques and Skills* for the 2008 TCAP test, the Hispanic EL students in District A ($M = 43.61$, $SD=16.01$) showed a decline in performance. See Table 4.13 below.

Table 4.13 Techniques and Skills Descriptive Statistics for Districts A

	Groups by District	N	Mean	Std. Deviation	Std. Error Mean
% Correct Techniques & Skills Year 2007	District A	153	50.35	24.60	1.99
% Correct Techniques & Skills Year 2008	District A	153	43.61	16.01	1.29

A paired samples *t*-test was conducted to compare percentage growth in *Techniques and Skills* TCAP scores for District A between test administration years 2007 and 2008. For District A Hispanic ELs did not show positive gains in growth in *Techniques and Skills* ($M= 6.75$, $SD= 24.78$). The decline in performance for *Techniques and Skills* between 2007 and 2008 students was significant [$t(152) = 3.37$, $p < .001$]. The 99% confidence level between the mean differences of the two test administrations was 2.79 to 10.70 (see Table 4.14 below).

Table 4.14 Paired Differences for Techniques and Skills for District A

		99% Confidence Interval of the Difference							
		Mean	Std. Dev.	Std. Error Mean	Lower	Upper	t	df	Sig. (2- tailed)
District A	% Correct Techniques & Skills 2007-08	6.75	24.78	2.00	2.79	10.70	3.37	152	.001

In *Techniques and Skills* for the 2008 TCAP test, the Hispanic EL students in District B ($M = 43.61$, $SD=16.01$) did show percentage growth. See Table 4.15 below.

Table 4.15 Techniques and Skills Descriptive Statistics for Districts B

		Groups by District	N	Mean	Std. Deviation	Std. Error Mean
% Correct Techniques & Skills Year 2007		District B	65	58.06	23.39	2.90
% Correct Techniques & Skills Year 2008		District B	65	66.38	21.32	2.64

District B Hispanic EL students showed positive percentage growth in *Techniques and Skills* ($M= -8.32$, $SD=23.22$). The growth in percentage points between the 2007 and 2008 years of test administration was significant [$t(64) = 2.89$, $p <.005$]. The 99% confidence level between the mean differences of the two test administrations was -14.08 and -2.57 (see Table 4.16 below).

Table 4.16 Paired Differences for Techniques and Skills for District B

				99% Confidence Interval of the Difference					
		Mean	Std. Dev.	Std. Error Mean	Lower	Upper	t	df	Sig. (2- tailed)
District B	% Correct Techniques & Skills 2007-08	8.32	23.22	2.88	14.08	2.57	2.89	64	.005

For Specific Research Question Four there was not enough evidence to directly support the claim that Hispanic ELs who were taught a developmental approach, Word Study, performed better on the TCAP reading *Techniques and Skills*. In fact, Hispanic ELs who were taught spelling and vocabulary with a rigorous developmental approach experienced a significant decline, while Hispanic ELs who were not taught through a developmental approach demonstrated a significant gain. While a direct comparison is not possible, Group B demonstrated better mean percentage score growth.

Specific Research Question Five

Do Hispanic ELs who were taught a developmental approach to spelling and vocabulary, Word Study, have better *Grammar Conventions* TCAP scores than Hispanic ELs who were not taught spelling and vocabulary with a developmental approach?

Null Hypothesis: There is no difference in *Grammar Conventions* TCAP scores for Hispanic ELs who were taught spelling and vocabulary with a developmental approach, Word Study, and Hispanic ELs who were not taught a developmental approach to spelling and vocabulary.

In *Grammar Conventions* for the 2008 TCAP test, the Hispanic EL students in District A ($M = 47.13$, $SD=21.34$) saw significant growth. See Table 4.17 below.

Table 4.17 *Grammar Conventions* Descriptive Statistics for Districts A

	Groups by District	N	Mean	Std. Deviation	Std. Error Mean
% Correct <i>Grammar Conventions</i> Year 2007	District A	153	40.03	19.29	1.56
% Correct <i>Grammar Conventions</i> Year 2008	District A	153	47.13	21.34	1.73

A paired samples *t*-test was conducted to compare percentage growth in *Grammar Conventions* TCAP scores for District A between test administration years 2007 and 2008. For District A Hispanic ELs showed positive gains in growth in *Grammar Conventions* ($M= 7.10$, $SD= 25.24$). The percentage growth for *Grammar Conventions* between 2007 and 2008 students was significant [$t(152) = 3.48$, $p < .001$]. The 99% confidence level between the mean differences of the two test administrations was 11.13 to 3.07 (see Table 4.18 below).

Table 4.18 Paired Differences for *Grammar Conventions* for District A

		99% Confidence Interval of the Difference							
		Mean	Std. Dev.	Std. Error Mean	Lower	Upper	t	df	Sig. (2- tailed)
District A	% Correct Techniques & Skills 2007-08	7.10	25.24	2.04	11.13	13.07	3.48	152	.001

In *Grammar Conventions* for the 2008 TCAP test, the Hispanic EL students in District B ($M = 66.51, SD=22.61$) did not see significant growth. See Table 4.19 below.

Table 4.19 *Grammar Conventions* Descriptive Statistics for Districts B

	Groups by District	N	Mean	Std. Deviation	Std. Error Mean
% Correct <i>Grammar Conventions</i> Year 2007	District B	65	76.05	24.10	2.99
% Correct <i>Grammar Conventions</i> Year 2008	District B	65	66.51	22.61	2.80

A paired samples *t*-test was conducted to compare percentage growth in *Grammar Conventions* TCAP scores for District B between test administration years 2007 and 2008. For District B Hispanic ELs showed declines in performance in *Grammar Conventions* ($M= 9.54, SD= 24.12$). The decline in performance for *Grammar Conventions* between 2007 and 2008 was significant [$t(65) = -3.18, p < .002$]. The 99%

confidence level between the mean differences of the two test administrations was 3.56 to 15.52 (see Table 4.20 below).

Table 4.20 Paired Differences for *Grammar Conventions* for District B

		99% Confidence Interval of the Difference							
		Mean	Std. Dev.	Std. Error Mean	Lower	Upper	t	df	Sig. (2- tailed)
District B	% Correct <i>Grammar Conventions</i> 2007-08	9.54	24.12	2.99	3.51	15.52	3.19	64	.002

For Specific Research Question Five there was not enough evidence to directly support the claim that Hispanic ELs who were taught a developmental approach, Word Study, performed better on the TCAP reading *Grammar Conventions*. Hispanic ELs who were taught spelling and vocabulary with a rigorous developmental approach, Word Study, experienced a significant gain, while Hispanic ELs who were not taught through a developmental approach demonstrated a significant decline. While a direct comparison is not possible, Group A demonstrated better mean percentage score growth.

Overall, both districts saw percentage growth between 2007 and 2008 test administrations in four out of five components on the TCAP reading category. District A experienced substantial percentage growth in each area except *Techniques and Skills*, while District B experienced substantial percentage growth in each area except *Grammar Conventions* (see Figure 4.1 below).

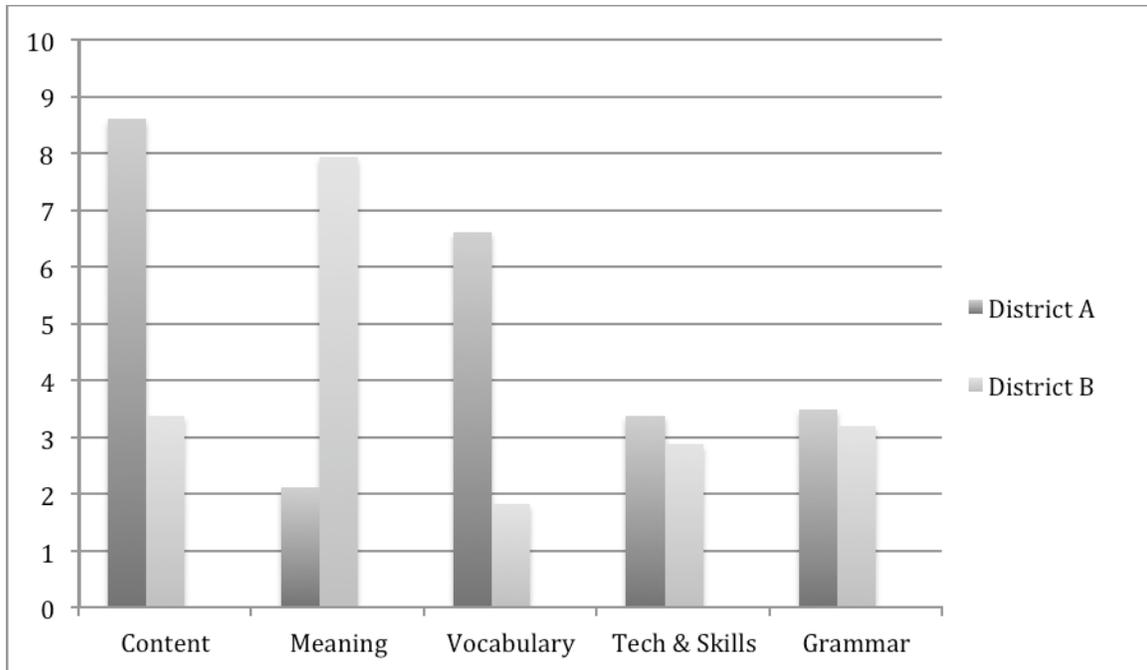


Figure 4.1 TCAP Percentage Growth for Districts A and B Between 2007-2008. Percentage growth for each of five components of the TCAP reading test given to third and fourth graders is shown above. District A experienced a developmental approach to instruction, while District B used a program adopted by the district.

Qualitative Analysis

A critical part of the success or failure of a new program of instruction when adopted for use in a school system is with those who are responsible for implementation. The program adopted in District A was introduced in 2005 when the students whose TCAP scores were used in this study were in second grade. The TCAP scores accessed were those after both two and three years of instruction in the new program. Teachers and reading specialists were responsible for attending professional development, then training those within their designated schools. To acquire information related to teacher attitudes and beliefs, and fidelity of implementation two focus groups were conducted, one per district.

Data Analysis

Data were collected from two focus groups, one per district. The process involved acquiring permission from each district and working with district contacts to involve the appropriate teachers in each group. At the beginning of each session participants were given confidentiality forms to sign and assured answers and discussion would not be compromised. For each session the district contact served as facilitator by asking the questions, while the session was audiotaped and scripted notes were taken by the researcher. The audiotape was later transcribed by the researcher and analyzed, along with the written notes, looking for recurring themes among each group, as well as between the groups.

The focus group in District A was comprised of nine teachers with an experience range of: 0-5 years (11%); 6-10 years (33%); and 10+ years (56%). During the years of the study 56% of these teachers had taught second grade, with other experience levels being in first, third, and fourth, and had represented eight of the 30 pilot schools.

The District B focus group represented four schools with teacher experience levels ranging from 0-5 years (42%) and 10+ years (58%) during the years of the study. These teachers were teaching first (25%), second (42%), third (67%) and other levels (2%). Eight of the 12 participants taught more than one grade level during the years of the study. This group of teachers had more teaching experience during the years of the study than did those in District A's focus group.

There were recurring themes between both groups to some of the questions, but distinct differences to others. Overall, both groups were positive in their attitudes toward

the importance of teaching spelling and vocabulary to primary level students, especially to the Hispanic students in their classrooms.

Research Question Two

How do teacher beliefs and attitudes toward spelling and vocabulary instruction affect Hispanic ELs' reading achievement?

Specific Research Question One

Do teachers in either or both districts believe spelling and vocabulary programs were implemented with fidelity?

For District A, which was implementing a new approach to spelling and vocabulary instruction, the implementation of and fidelity to the program was varied according to the responses of the representative teachers in the group. For those who were new teachers at the time of this implementation the approach was more appealing and easier for them to accept and implement since they did not have experience with the “old” way of spelling and vocabulary instruction. Experienced teachers reported having difficulty making the change, but did so gradually, often revisiting the spelling books or former program.

For participants in the District B focus group the spelling and vocabulary program was part of their published reading series. New teachers and experienced teachers implemented the program as instructed by the professional development provided by the representatives of the publisher and their local school district. This program was driven by very traditional instructional approaches to the teaching of the curriculum.

Specific Research Question Two

Do teacher beliefs and practices vary between the two spelling and vocabulary programs?

Similarities between the two focus groups involved teachers' beliefs that writing and communication is critical, which is dependent on spelling and vocabulary acquisition. Both groups were in agreement that spelling instruction must include spelling patterns and reading comprehension is dependent on an understanding of vocabulary terms along with knowing spelling patterns for decoding purposes. Both groups gave weekly spelling assessments and stressed the importance of spelling and vocabulary instruction to reading and writing. Both groups stressed the importance of spelling and vocabulary instruction to reading fluency and comprehension.

The differences between the groups were in instructional approaches which were related to the use of a published program for District B, along with the use of workbooks and traditional rote memorization techniques taught to students for their spelling and vocabulary. In District A, those who implemented the newer approach, Word Study, assessed frequently and used data to place students at the appropriate level for instruction. These practices also led to more differentiation for spelling lists and challenges to manage the logistics of the multiple spelling tests per week versus one test for the entire class.

Specific Research Question Three

How many times per week did spelling and vocabulary instruction occur in each district?

Teachers in both districts agreed spelling and often vocabulary instruction occurred either through direct teaching or the use of workbooks or centers almost every day. Spelling and vocabulary testing was performed on a weekly basis. Both districts provided professional development for their teachers before expecting them to implement the spelling and vocabulary programs of their choice. Interestingly, spelling and vocabulary assessment was usually given on Friday.

District A teachers discussed the challenges of change as they moved from whole group spelling and vocabulary assessment to a more individualized approach. This new approach appealed more to inexperienced, new teachers than to those with more experience. The experienced teachers sometimes reverted back to the comfort of the spelling text while also trying to implement the more frequent, individualized assessments required in Word Study. Learning centers were used to ensure regular spelling and vocabulary practice in which Word Study strategies were taught to the entire class. The Developmental Spelling Analysis assessment was given by District A, both at the beginning of the year and at the end of the year, while features assessments were given frequently to allow teachers to place students at the appropriate instructional spelling and vocabulary level. Data from these assessments were used to track student progress.

District B used a literacy workbook that was a companion to the basal reading series. The teachers reported giving a pre-test on Monday, having students complete a workbook page every day, and ending the week with a spelling test on Friday. Data gathered from weekly spelling and vocabulary assessments were used for purposes of assigning grades.

Specific Research Question Four

Did teachers differentiate spelling and vocabulary instruction for Hispanic ELs in each district?

Responses from District A teachers regarding differentiation were that all their students were being taught and assessed on their own individual levels, including their Hispanic students. Applying Word Study to classroom instruction was a necessary, but a practical way to provide instruction on every student's level.

District B teachers reported modification of spelling and vocabulary lists and tests was left up to the individual teacher. During the time of this study, there were not many Hispanic EL students attending District B's schools. Many of the primary teachers did label items in the classroom to try to facilitate learning English, but many of the Hispanic EL students were reportedly bused to another school for most of their instruction. Shortening the list of words rather than leveling the lists after assessing the needs of the students often accomplished the approach to modification of spelling and vocabulary lists.

CHAPTER 5

RESULTS AND CONCLUSIONS

The purpose of Chapter 5 is to summarize the crucial issues related to the study of the impact spelling and vocabulary approaches have on reading acquisition for Hispanic EL students in the two school systems involved in this study. This chapter will also contain a brief discussion of the findings along with an interpretation of the findings. Implications for practical application in the classroom, as well as recommendations for future research will follow the discussion.

Purpose of the Study

The purpose of this study was to analyze whether results of the use of Word Study in one urban school district comprised mostly of students from low socioeconomic status, a high percentage of English language learners, and a very fluid enrollment has promoted growth in reading, spelling, and vocabulary compared to a different urban school system which used the published basal reading program for spelling and vocabulary instruction. The objective of the investigator was to determine if the implementation of the Word Study approach resulted in greater spelling, vocabulary, and reading growth over the more traditional approach of using a published program found within a basal reading series.

Summary of Existing Research

Existing research has suggested the approach of teaching spelling and vocabulary, using Word Study, along with the supportive components of the program such as formative assessment for planning individualized instruction at students' instructional levels is a more research-based approach as opposed to rote memorization.

Developmentally appropriate instruction in spelling requires teacher knowledge of students' background understanding of words in order to provide appropriate spelling instruction for each student (Ganske, 1999). Research conducted as early as the 1960s began to show the consistency of the system of English orthography (Hanna, Hanna, Hodges, & Rudorf, 1966). Later research affirmed the use of spelling patterns for spelling instruction (Moats, 2005) which supported the use of children's invented spelling to learn language through their knowledge of letter-sound relationships (Gentry, 2004; Graham et al., 2008).

American schools are becoming more diverse each year. Byrnes and Kiger (1998) stated "The varieties of language backgrounds that characterize students in contemporary society pose an unprecedented challenge to teachers" (p.26). Teachers' lack of skills, knowledge, and experience in working with language-minority students, even when teachers display positive attitudes, presents a challenge to educators everywhere. There are myriad issues from poor institutional practices to students' weak levels of first-language literacy skills to poverty that all play an important role in the success or failure of EL students. Though these are all challenges within themselves, Janzen (2008) affirmed earlier research by Byrnes and Kiger (1998) maintaining a critical

component of the issue is a lack of teachers who are prepared to work with nonnative English speakers.

Janzen (2008) noted important aspects of effective teaching for Hispanic EL students should include creating a classroom culture that mirrors the students' own cultures, utilizing the students' first language to empower them in the classroom by understanding differences in learning in the first language versus the second language, and recognizing the value of explicit instruction in all literacy related areas. The present study contributed to the growing body of knowledge by bringing a perspective of the use of one program's individualized approach compared to a different program's use of a research-based published series.

Discussion

The findings of the study raised questions as to the growth demonstrated through TCAP scores in the reading component through the use of one program over another. Both programs were based on strategies supported by existing research. While both systems presented growth in four out of five areas, each system had one component area, different from the other, where a decline in scores revealed students who did poorly in that particular component on the 2007 test administration as well as the 2008 administration. These areas were different for each system. Hispanic EL students who had been in each program for second through fourth grades were included in the study. The question of why growth was shown for both groups in the first three components, while each group had declined on a different component in the final two areas of the reading TCAP test merits further investigation.

For reading *Content* District A demonstrated significant percentage growth between 2007 and 2008 test administrations. This TCAP component of the test includes identification of setting, characters, and plot; identification of text structures such as poems, plays, or stories; determination of sequence of events; recognition of basic plot features of fairy tales, folk tales, fables and myths; and determining problem and solution in a story. The ability to demonstrate skill on the above portions of the TCAP reading content assessment requires students to be able to decode words, read fluently and comprehend what is being read. Ness (2010) identified a pattern layer to Word Study that helps students use patterns within words to foster an approach to fluency in reading. This use of patterns would enhance an ability to decode unknown words and understand the meaning behind the components of those words, promoting reading fluency and comprehension to aid in demonstrating success for students on the reading content assessment. The explicit instruction in the alphabetic, pattern and meaning layers of developmental word study, part of the program Word Study, supported EL students in successfully achieving success on the reading content portion of TCAP.

District B showed significant percentage growth on the reading content TCAP test between 2007 and 2008. This could be a result of the basal reading program being focused on existing research comprised of components for developing early foundational reading skills. Foorman and Petscher (2010) affirmed earlier studies of the essential relationship of phonemic awareness and phonics to reading and spelling, stating the importance of complete orthographic representations to success in decoding. As with District A, EL students in District B were also supported in achievement on the reading

content TCAP subtest through the program's focus on phonological awareness needed to foster fluency and comprehension.

The reading *Meaning* component of the TCAP test for District A revealed percentage growth between 2007 and 2008. Within this testing component, students are assessed on main idea of a reading selection, cause and effect of relationships, fact and opinion within texts, questions to clarify thinking during reading and inferences. The components of Word Study, including the meaning layer (Ness, 2010), assisted students in understanding relationships between words and the ideas represented by text. Students were introduced to the meaning of affixes and root words which support understanding as they read, especially new words. The explicit instruction of this program for the EL students in the study allowed for application to learning as the passages of the TCAP test were read.

District B students were instructed in the basal reading program's approach. The spelling and vocabulary instruction, which assisted in reading fluency, was based on recent research. These students also saw significant percentage growth in this particular component of the TCAP reading assessment, most likely due to the research applied in the reading program the school district was using at the time.

The results of the *Vocabulary* subtest within the TCAP assessment showed a significant percentage growth for District A's implementation of the Word Study method. The *Vocabulary* component of TCAP is comprised of many specific skills related to word meaning. These include rhyming words, distinguishing distinct sounds within words, recognizing root words and inflections, using context of affixes to determine word meaning, recognizing grade level compound words, synonyms and antonyms, using

context clues to determine word meaning, recognizing grade appropriate vocabulary within context and determining correct meaning of multiple meaning words within context.

As stated earlier by Carlo et al. (2004), vocabulary instruction for EL students should have a more narrow focus, fewer words using context, use of first language cognates, and analysis of morphological structure for assisting students in understanding meaning. The structure of Word Study encompasses the use of alphabetic, pattern, and meaning layers for spelling, reading, and writing instruction. The instructional approach of Word Study for EL students, who begin to learn the meaning of affixes of words very early, creates an understanding of the small units of meaning (morphemes) that is more sophisticated by the time the students are in eighth or ninth grades.

District B, using the published basal reading program's vocabulary instruction, made small percentage growth gains in *Vocabulary*. This is not surprising, given that the Word Study instructional approach is more explicit and individualized. This affirms Carbo et al.'s (2004) earlier research that supports both explicit and individualized instruction, especially for EL students.

The category designated as *Techniques and Skills* specifically assesses students' abilities to identify correctly spelled words or misspelled words in context, as well as other language-arts related skills. Existing research studies by August et al. (2006) revealed a greater need for explicit instruction in the various aspects of reading for EL students, especially for Spanish-speaking EL students. This instruction would include spelling instruction. Ness (2010) reported earlier studies, related to an integrated approach to Word Study, concentrated on spelling, meaning, and grammar connections to

build vocabulary and orthographic knowledge for students. This approach is explicit in strategies for instruction used with students. It is surprising that Hispanic EL students in District A, who experienced Word Study from second through fourth grades during the years of this present study, did not experience significant growth. As reported earlier, growth did occur in the *Vocabulary* area, however in *Techniques and Skills*, there was a significant decline in the mean scores for students between the 2007 and 2008 test administrations. This would indicate that students who did poorly in 2007 as third graders also did poorly in 2008 as fourth graders on *Techniques and Skills*.

District B students, including Hispanic EL students, were instructed in spelling and other language skills through the basal reading program's spelling and vocabulary components. The reading program used by District B, while research based, did not use the individualized approach to assessment and instruction in spelling and vocabulary that was employed by District A. It is interesting to note the Hispanic EL students in District B demonstrated significant percentage growth in *Techniques and Skills* between the 2007 and 2008 test administration years.

The final component of the TCAP reading assessment investigated in this study was the category of *Grammar Conventions*. The subtests in this category relate to language arts components that affect the reading and understanding of text. Included in this category are uses of capital letters; subject and predicates of a sentence; correct usage of nouns, verbs, and adjectives in context; use of commas; types of sentences, such as declarative, interrogative, and exclamatory; formation of contractions and plurals; and identification of usage errors in context. These components within a reading text affect the meaning of text. For Hispanic EL students to be able to read fluently with

understanding, instruction in this area is important. Word Study instruction, according to Ness (2010) concentrates on spelling, meaning, and grammar connections to build vocabulary and orthographic knowledge for students. District A Hispanic EL students received instruction in a focused, explicit instructional approach that supported the percentage growth gains in *Grammar Conventions*. Hispanic EL students in District A saw significant percentage growth gains in this category.

District B Hispanic EL students did not demonstrate percentage growth gains in *Grammar Conventions*. There was a decline in mean scores between the 2007 and 2008 administrations of the TCAP test, indicating students who did not do well in 2007 did not do well in 2008. The results of this component may relate to the less explicit approach to instruction of the basal reading program. While there are a few lessons that include the grammar components mentioned above, traditionally a basal reading series does not focus much attention to those skills since language arts skills are often taught separately in the elementary classroom. District B Hispanic EL students may have had less focus on the grammar components outside of the reading series than the students in District A, whose program of Word Study included a focus on some of these *Grammar Conventions* which was focused and explicitly taught.

Implications for Practice

Reading acquisition for Hispanic EL students can be difficult based on the fact that orthography of the English language is very deep as opposed to that of the Spanish language which consists of a shallow orthography (August et al. (2006). The student population of this study was narrowed to only Hispanic English Learners from two urban

school districts. The students selected for the study were those who had been in the schools from fall 2005 through spring of 2008. The students in District A were in a pilot program (Word Study) new to the district. Students in District B were students who were in their respective schools during the timeframe. District B students received spelling and vocabulary instruction through the basal reading series selected by the school district. Both districts provided professional development for teachers, support and resources for classroom implementation of the selected program, and access to district leadership for any guidance needed.

Strategies and instruction for students in both districts were similar due to the research-based foundation of both programs. There were differences in two of the reading subtests between Word Study and the basal program that resulted in performance gains in four out of five areas, with each district having a decline in a different subtest. In one area, *Techniques and Skills*, the students in the basal program outperformed the Word Study group, which surprised the investigator, while in the area of *Grammar Conventions* the Word Study group outperformed the basal program group. Findings indicate that EL students benefit from both plans of instruction found in both programs. Fidelity to implementation plans for both groups can foster success for students, especially EL students, as demonstrated by the fact that both groups of students made performance percentage growth gains in four out of five subtests of the reading component of TCAP.

This study has suggested the following recommendations for improving reading acquisition for Hispanic EL students through spelling and vocabulary instruction:

- Formative assessment should be used on a regular basis to provide for individualized instruction in both spelling and vocabulary.

- The number of diverse student languages and backgrounds can be overwhelming to teachers. Classroom resources and support in the form of access to information about students' background cultures, languages, and customs can be important for teachers to plan appropriate instruction for EL students.
- Focused instruction needs to be a practice for EL students in reading, including spelling and vocabulary.
- Focus on phonemic awareness and phonics is important for understanding and using the alphabetic code.
- Vocabulary instruction should be a combination of employing direct instruction for teaching new words, while also enhancing incidental learning through myriad opportunities for encountering novel words in authentic and motivating text (Carlo et al., (2004)).
- Spelling practices should include instruction in early foundational spelling and reading skills such as letter name. Students should be taught the alphabetic layer, the pattern layer, and the meaning layer, while moving away from the use of only rote memorization.

Recommendations for Future Research

This research offers implications for adding to the body of research on the roles of spelling and vocabulary in reading acquisition for EL students. The first consideration is that results provide statistically significant indicators of the components of reading necessary to ensure success for Hispanic EL students. The analysis method used in this study was to compare percentage growth in each component of the TCAP reading test

taken in both 2007 and 2008. The reason for choosing these specific years was to determine if Word Study made a significant difference in reading acquisition for these identified students. The results were supportive of the program, but students in it did not show significant gains over those of the identified students in the other program.

Secondly, urban, suburban, and rural schools throughout Tennessee are seeing an increase in EL student population. These students are very diverse in background, but a large population is from a Hispanic culture. This study looked at a narrow group, only Hispanic students, who were in two specific urban school districts in Tennessee. The results of this study can lay a foundation for informing educators about effective reading, spelling, and vocabulary strategies for students who are from different backgrounds and cultures. As we move forward in addressing the needs of EL students in reading, the following questions could be addressed in further studies:

- What is the impact of targeted professional development on teachers of EL students' reading success?
- Does a teacher's understanding of the English orthography as it relates to spelling instruction correlate in any way to the understanding and use of the second language orthography for teaching reading, spelling and vocabulary instruction?
- What is the most effective method implemented by school systems or state education officials to provide professional development related to specific strategy and instructional planning support to teachers of EL students?
- As more nonnative English speakers enter schools across our nation how does teacher preparation in higher education institutions need to change to prepare teachers to effectively teach EL students reading, spelling, and vocabulary?

- Do class size, classroom environment, and teacher attitude impact the reading success of EL students? If so, how?
- How does teacher experience with program implementation impact student scores in reading, vocabulary, and spelling?

Conclusions and Comments

Schools in the United States are becoming more diverse in population at a very rapid rate. This is also true in Tennessee with an influx of families from multiple cultures crossing our borders every day. Hispanic immigrants are not the only ones who are coming into our country, as in Tennessee we have a plethora of immigrants from nations worldwide. This has impacted education as schools try to assimilate these students into the classroom and provide instruction that is needed for them to be successful adults (Fender, 2008). Al Otaiba and Hosp (2010) affirmed that over 40% of fourth graders in American schools cannot read beyond a basic reading level. The National Center for Education Statistics (2009) also stated that the percentage is greater for minorities and children who live in poverty.

It is the hope of the researcher that the results of this study will encourage future researchers and practitioners to continue to investigate the reading, spelling, and vocabulary instructional needs of not only Hispanic EL students, but students who are in Tennessee classrooms from all cultural backgrounds. Teacher preparation, differences in learning, and instructional practices implemented with fidelity will help ensure reading success for Tennessee students no matter what their nationality or culture.

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APPENDIX A
QUESTIONS FOR FOCUS GROUPS

Questions for Focus Groups
RE: 2005-2008

- In your opinion, why or why not, should spelling and vocabulary instruction be included in the lower elementary grades?
- How do spelling and vocabulary affect reading success or failure?
- How, and by whom, was professional development for implementing spelling and vocabulary provided?
- Specifically, how were students instructed in spelling and vocabulary every day?
If not every day, how often?
- How did classroom implementation of the spelling program (or alternative) follow the program's specific instructional plan?
- How often were spelling assessments given?
- How were data from assessments used? How were spelling lists differentiated for Hispanic English Learners?
- What evidence of vocabulary growth was related to the spelling/vocabulary instruction within the program for Hispanic ELs?
- In your opinion, how did the spelling program, or alternative plan, positively impact Hispanic English Learners and native English-speaking students?

APPENDIX B

CONSENT FORM FOR PARTICIPATION IN A RESEARCH STUDY

Consent Form for Participation in a Research Study
The University of Tennessee at Chattanooga

Principal Investigator: Etta Crittenden

Study Title: ENGLISH LEARNERS' READING ACQUISITION: EVALUATING SPELLING AND VOCABULARY APPROACHES IN TWO TENNESSEE URBAN DISTRICTS

Introduction

You are invited to participate in a research study to compare two different approaches to spelling and vocabulary instruction to determine if one approach is more effective in reading acquisition for Hispanic EL students. You have been invited to participate in this study because you taught 2nd, 3rd, or 4th grades during the 2005-06, 2006-07, or 2007-08 school years. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

Why is this study being done? The problem to be investigated in this study is whether the use of District "A"'s model of instruction had a discernable impact upon English Learners' reading and vocabulary, and reading comprehension versus that of District B. The spelling and vocabulary program in District A implemented during the 2005-2006 school year in a large urban school district, will be compared to District "B"'s model of instruction to determine immediate and long-term outcomes as reflected on the TCAP reading assessment.

What are the study procedures? What will I be asked to do? If you agree to be in this focus group, you will participate in a tape-recorded group discussion to answer specific questions regarding the instructional model used by your school district for teaching spelling and vocabulary to Hispanic EL students in your classroom. The session will then be transcribed by the researcher and the tape then destroyed. The transcription will be kept in a locked file cabinet until the study is complete. At that point the transcription will be destroyed, along with the signed consent forms.

What are the risks or inconveniences of the study? I do not anticipate any risks to you participating in this study other than those encountered in day-to-day life. The inconvenience will be traveling to the site for the focus session.

What are the benefits of the study? Studies have shown poor spellers are very limited in their ability to communicate, since spelling plays a critical role in reading and writing fluency, as well as in developing students to become articulate speakers). English Learners (ELs) need specific spelling instruction as they learn to read and write in

English. Other research studies have shown a large, persistent gap in reading performance for students who are English Learners as opposed to those who are monolingual English-speaking students. The gap identified is representative of both intellectual and practical challenges. The benefits of this study will assist educators in determining appropriate spelling and vocabulary instructional approaches to ensure immediate and long-term successful reading achievement as reflected on the TCAP reading assessment.

Will I receive payment for participation? Are there costs to participate?

There will be no payment for participation, nor any cost to participate.

How will my personal information be protected?

The UTC Institutional Review Board (IRB) may inspect study records as part of its auditing program, but these reviews will only focus on the researchers and not on your responses or involvement. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

Can I stop being in the study and what are my rights? Your participation in the focus group session is strictly voluntary. You may skip any question(s) that you do not want to answer. If you decide to skip any questions it will not affect our current or future relationship with the University of Tennessee at Chattanooga.

Whom do I contact if I have questions about the study?

The researcher conducting this study is Etta Crittenden. Please ask any questions you have now. If you have questions later, you may contact Etta at Etta.Crittenden@comcast.net or at 615-969-5255. You may contact the Institutional Review Board (IRB) at instrb@utc.edu or Lindsay Pardue, Director of Research Integrity, at (423) 425-4443.

Documentation of Consent:

I have read this form and decided that I will participate in the project described above. Its general purposes, the particulars of involvement and possible hazards and inconveniences have been explained to my satisfaction. I understand that I can withdraw at any time. My signature also indicates that I have received a copy of this consent form.

_____	_____	_____
Participant Signature:	Print Name:	Date:
Relationship (only if not participant): _____		
_____	_____	_____
Signature of Person Obtaining Consent	Print Name:	Date:

APPENDIX C
INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

MEMORANDUM

TO: Etta Crittenden **IRB # 12-147**
Dr. Valerie Rutledge

FROM: Lindsay Pardue, Director of Research Integrity
Dr. Bart Weathington, IRB Committee Chair

DATE: September 26, 2012

SUBJECT: IRB # 12-147: English Learners' Reading Acquisition: Evaluating
Spelling and Vocabulary Approaches In Two Tennessee Urban Districts

The Institutional Review Board has reviewed and approved your application and assigned you the IRB number listed above. You must include the following approval statement on research materials seen by participants and used in research reports:

The Institutional Review Board of the University of Tennessee at Chattanooga (FWA00004149) has approved this research project #12-147.

Please remember that you must complete a Certification for Changes, Annual Review, or Project Termination/Completion Form when the project is completed or provide an annual report if the project takes over one year to complete. The IRB Committee will make every effort to remind you prior to your anniversary date; however, it is your responsibility to ensure that this additional step is satisfied.

Please remember to contact the IRB Committee immediately and submit a new project proposal for review if significant changes occur in your research design or in any instruments used in conducting the study. You should also contact the IRB Committee immediately if you encounter any adverse effects during your project that pose a risk to your subjects.

For any additional information, please consult our web page <http://www.utc.edu/irb> or email instrb@utc.edu

Best wishes for a successful research project.

VITA

Etta Crittenden was born in Tulsa, Oklahoma to Johney and Etta Belle Crittenden. She was the oldest of three daughters. She grew up in Oklahoma, attended public schools and graduated from Owasso High School. She then attended Free Will Baptist Bible College (now Welch College) in Nashville, TN. where she obtained a bachelor's degree in Bible and Elementary Education. She taught in both private and public schools and attended Tennessee State University where she was awarded her master's degree. Etta accepted a job at the Tennessee Department of Education in 2002 as an Education Consultant and completed her Ed.D. degree in Learning and Leadership at the University of Tennessee at Chattanooga in May, 2013. Etta is currently an Education Consultant in the Division of Curriculum and Instruction at the Tennessee Department of Education. Etta is very involved in her church, serves on the Tennessee Reading Association Board of Directors, is a member of Delta Kappa Gamma, and is an adjunct professor at Welch College. In her spare time she loves to read, socialize with friends, travel, and cross-stitch.