Case Study: A Holistic Approach in the Orthographic Development of One Emergent Learner

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Case Study: A Holistic Approach in the Orthographic Development of One Emergent Learner

by
Teresa Isabelle Singh
May 2015

A culminating project submitted to the Department of Education and Human Development of The College at Brockport, State University of New York in partial fulfillment of the requirements for the degree of Master of Science in Education
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Chapter One: Introduction

Statement of the Problem

During another late afternoon tutoring session with my kindergarten student, Sophia (all names are pseudonyms), I had just finished reading aloud the picture book *Memoirs of a Goldfish*, (Scillian, 2010) when the thought occurred to me of making Sophia her very own memoir book to illustrate and journal. Her face lit up at the notion of writing her own daily reflections, which was sort of like the goldfish in the story. I thought perhaps I found a means for elevating Sophia’s writing. And it seemed as though I found an opportunity to have Sophia write something real and relevant to her own life as an emergent learner and writer. However, I began to wonder, how might I use these writings to meet learning objectives while also allowing Sophia to engage in what motivated her?

A few isolated moments of reflection led to understanding how this writing could further guide my instruction. One of these moments occurred after reviewing a short three-picture storyboard with accompanying sentences that Sophia wrote to reflect on the story of *The Little Red Hen* (Galdone, 1985). Through this storyboard assignment, I intended to have Sophia practice writing sentences with short *e* words (e.g., red, hen, pen, ten), which was something we worked on prior to the reading. I knew that I wanted to work on Sophia’s orthographic knowledge and I knew that I wanted to use more authentic strategies for learning orthography other than rigid prescriptive spelling assessments. I thought that allowing Sophia to learn and expand upon what she understands about orthography within the context of picture books was authentic. I also thought that by assessing her orthographic knowledge through her writing, that I was, indeed providing authentic forms of learning.

The outcome resulted in a fragmented glimpse of Sophia’s orthographic knowledge,
while also displaying a regurgitated and limited form of writing. Yes, I had shifted away from the prescriptive spelling assessments, but I had instead designed a structured form of application that limited my view of Sophia’s orthographic knowledge, in ways just like that of the formal assessments. My instruction in spelling leaned toward a tangential bottom-up approach that seemed irrelevant to Sophia’s language development as an emergent learner. When I considered the prescriptive spelling assessments that we subject our students to, I realized that these assessments only offer us limited analysis of what our students understand about language use. Conversely, the analysis of students’ authentic writings offers a deeper perspective into their growing knowledge of language. Through authentic writing, formative assessment can guide our instructional practice of the child’s orthographic knowledge and use of orthography.

Thinking back to Sophia’s memoir, through high-levels of engagement, Sophia experienced one form of authentic learning as an emergent learner in both writing and spelling. The results provided a rich source of informative data to analyze. Details included phoneme knowledge and letter-sound correspondence; spatial recognition and directionality; sentence structure; and capitalization and punctuation. Through these artifacts, a lens into the working orthographic knowledge that emergent learners like Sophia use, I realized I could possibly guide spelling instruction in a more authentic and relevant manner. The idea of taking the analysis from this rich source of writing was something I wanted to investigate further.

**Significance of the Problem**

In classrooms across the country, spelling assessments predominately take two forms for providing evidence into the emergent learner’s orthographic knowledge. One form is prescriptive, feature-based assessments. These assessments, such as the Developmental Spelling Assessment (DSA) (Ganske, 2000), help teachers assess the stages of student spelling
development by highlighting the student’s strengths and areas that need further focus. Besides determining the level or stage of student development, these types of assessments also identify specific features of spelling such as pre-phonetic, semi-phonetic, phoneme-grapheme correspondences, single-syllable, juncture, or joining of syllables, such as consonant doubling, and dropping the final e before *ing* (Ganske, 2000).

While the prescriptive assessments provide formative data into what spelling features the child comprehends or misunderstands, the second form of spelling assessment common within classrooms are Friday Spelling Tests. These are generally teacher-selected or scripted grade-level appropriate vocabulary words used to expose students to an extensive quota of words. This emphasis stems from research indicating two significant predictors to the level of success students will have in school. Research showed a significant *vocabulary gap* for children entering school with different levels of vocabulary knowledge (Hart & Risley, 1995). This gap is created before children enter school and continues through the primary grades. Secondly, research reflected that linguistically poor first graders knew 5,000 words; linguistically rich first graders knew 20,000 words (Moats, 2001). These differences in the amount of exposure to linguistics and literacy prior to entering school and the variance in socio-economic status both play a significant role in influencing teachers to focus on closing this gap.

In our data-driven school environment, the prescriptive assessments offer quick insight into the child’s conceptualization of orthography. The spelling-features data inform us of what orthographic rule(s) the child has not yet grasped, while the teacher-selected spelling tests support the need of exposing students to tiered-level words. However, both offer a myopic view into a child’s orthographic knowledge. In a one-size fits all perspective these assessments lack a level of complexity that exists for all children as they learn about the malleability of language.
According to the work by McGee and Richgels (2012), language acquisition is a long journey, and as the emergent learner embarks on this voyage, “what happens during the journey is as valid as the end point” (p. 24). It is these early stages of meaning-form[ing] links (McGee & Richgels, 2012), that offer a depth to the orthographic shifts that occur from novice to experimenter, to conventional readers and writers.

When we take into consideration the expectations of the Common Core State Standards (CCSS) (2010), we find the emergent learner is expected to represent learning in both language development and writing in a manner that goes beyond rote memorization and spelling rules. The following is a list of expected language development standards from the CCSS (2010):

- **CCSS.ELA-Literacy.L.K.2c** Write a letter or letters for most consonant and short-vowel sounds (phonemes).
- **CCSS.ELA-Literacy.L.K.2d** Spell simple words phonetically, drawing on knowledge of sound-letter relationships
- **CCSS.ELA-Literacy.L.K.4a** Identify new meanings for familiar words and apply them accurately (e.g., knowing duck is a bird and learning the verb to duck).
- **CCSS.ELA-Literacy.L.K.4b** Use the most frequently occurring inflections and affixes (e.g., -ed, -s, re-, un-, pre-, -ful, -less) as a clue to the meaning of an unknown word

(Standards of English section, para. 1-5).

Conversely, in writing, student expectations include (CCSS, 2010) “demonstrate[ing] increasing sophistication in all aspects of language use, from vocabulary and syntax, to the development

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1 Refers to: Common Core State Standards, English Language Arts, Language, Kindergarten, Standard #, Sub category letter
and organization of ideas, [to] address increasingly demanding content and sources” (Writing, introduction section, para. 1). In both cases, the emergent learners are required to apply their orthographic knowledge within accurate context or syntax. This means that teachers need to provide writing opportunities for students to apply their working knowledge of these concepts.

Herein lies the problem: if we continue to only rely on prescriptive feature-based and teacher-selected Friday Spelling assessments, we not only limit our insight into the child’s orthographic knowledge, but we also limit their success in giving them the opportunity to write and use language in the manner expected by the Common Core Standards (2010).

**Purpose of the Study**

We know that within the first year of school, reading and writing expectations expand as the emergent learner shifts from a *novice* language user to becoming an *experimenter* with language (McGee & Richgels, 2012, p. xx). In the *experimenting stage* of the child’s life, significant growth occurs in language development. Depending on the learner’s grasp of the malleability of language while experimenting through writing, components of orthographic knowledge may develop at different rates. As the child begins to apply this learning to writing, concepts are exposed and it is here that teachers can gauge the child’s understanding and provide the appropriate levels of support.

The purpose of this study was to analyze one emergent learner’s writing and develop spelling instruction designed to support what the student understands as well as address orthographic misconceptions, and provide further support and instruction in areas that have not quite been solidified. By providing opportunities for the emergent learner to write authentic texts, I hoped to uncover and understand her working knowledge of language use. I planned to analyze writing artifacts in order to interpret this working knowledge by identifying behaviors,
techniques, and strategies used by the emergent leaner. From my analysis, I hoped to develop a conceptual framework for the language approximations, misconceptions, and understandings of the child in order to guide the spelling instruction that follows.

Through this study, I hoped to develop my skills in student observations, spelling analysis, and spelling instruction. With the intent to support the emergent learner in her zone of proximal development (Vygotsky, 1978) I also hoped to provide the appropriate spelling instruction that will feed-forward (Frey & Fisher, 2011) her orthographic knowledge. For this purpose, my research question is as follows:

How might spelling instruction focused on analysis of an emergent writer’s unconventional spellings in authentic texts impact her orthographic knowledge?

**Study Approach**

This study used a qualitative design as I analyzed the writing behaviors and writing artifacts of one emergent learner. In order to understand the child’s working orthographic knowledge, the qualitative data I collected included a journal of the student’s writing behaviors combined with her writing artifacts to determine the best spelling instruction. Detailed lesson plans included clear lesson objectives followed by a reflective component of each spelling lesson. This reflective component provided important feedback as I moved forward with each lesson plan.

**Rationale**

As my own knowledge of language acquisition and use develops as a professional, I find it particularly important not only to understand my role as an instructor, but also ways of supporting emergent literacy development. Grounded by theories of scaffolding students based on (Vygotsky, 1978) *Zone of Proximal Development*, I find it essential to learn how to support
emergent learners adequately without pushing them into a zone of frustration. In order to do this, I believe that informal but formative assessments are a key element in helping to guide my instruction in ways that not only provide feedback to the student, but also help move forward in the learning process. This requires documenting the child’s literacy development through the practice of both observations and note taking, in order to provide a frame for gaining insight into how children think and learn. The observational framework for this study is based on Owocki and Goodman’s (2002) *Kidwatching* techniques book that outlines specific aspects of kidwatching by suggesting that teachers pay specific attention to areas such as writing within emergent literacy. This particular way of collecting data emphasizes the importance of reflection after data collection. This value on thoughtfulness of the teacher’s observations is what I believe to be a missing component in formative assessments in classrooms today. This approach goes beyond results-oriented feedback by valuing student-exhibited behaviors as children work to conceptualize language. In turn, this valuable feedback will provide a holistic view of the emergent learner’s orthographic knowledge.

In this study, the participant is an emergent leaner named Sophia. She is a six-year-old girl that I have worked with as a private tutor for several months. Currently Sophia is in kindergarten, and attends an International Baccalaureate Primary Years Programme, IB-PYP within a suburban Upstate New York school district.

**Summary**

Over the past months, I have seen the value in encouraging the emergent learner to engage in authentic writing practice. Through these writing artifacts, the potential for detailed analysis exposed language approximations, misconceptions, and understandings within the learner’s orthographic knowledge. This analysis also revealed behaviors otherwise overlooked if
teachers continue to limit spelling instruction to only prescriptive and teacher-selected spelling assessments. Through this study, I found out the impact spelling instruction can have if guided by this holistic view of the emergent learner’s writing.
Chapter 2: Literature Review

Spelling seems to be a frightful judgment of divine wrath, which the righteous God had allowed to come upon us and oppress us for a long time on account of our school sins” (Ventzky, 1722, as cited in Masterson, 2010, p. 185).

As quoted, we understand the daunting feeling of those looming Friday spelling tests that seemed to determine our fate and in some cases the weekend doom that resulted if we failed. Interestingly, some three hundred years later not much seems to have changed in how teachers assess the spelling achievement of their students. Is that because spelling assessments of rote memorization is the best predictor of good spellers? Or on the other hand, is it because giving these assessments provides adequate feedback of students’ misconceptions of orthographic rules? As teachers, we understand that an emergent learner’s acquisition of language is complex. Equally complex is the teacher’s perspective in understanding how these language learners develop and use language. However, are the assessments of orthography used today in the best interest of developing students’ spelling ability and guiding instruction? This chapter explores and attempts to synthesize the current state of knowledge in the area of understanding orthographic development of the emergent child. History proves that spelling assessment predominantly focused on spelling in isolation or by dictation; but what about examining student writings? Are writing samples worthy indicators of a student’s conceptualization of orthography? Do these opportunities to write offer an adequate predictor of the child’s orthographic knowledge?

This review revealed the complexity in the field around the definition of orthography, a word used synonymously with spelling, and the surrounding influences on a child’s orthographic knowledge. Furthermore, this review also revealed foundational approaches to spelling assessments focused upon orthographic rules as well as approaches to assessing student-
produced writings. By analyzing written samples from emergent learners, some teachers agree they provide the opportunity to uncover some of what the child understands about language orthography as well as misconceptions of spelling in a more holistic manner. However, others debate this through proven research supporting explicit instruction, and the benefits that exists within a systematic approach. The research also revealed the complexity researchers face in analyzing data collected on assessments, the interpretation of this information, and implications for both researchers and teachers.

**How Emergent Learners Learn to Spell**

**Stages of Emergent Language**

Within the last year, from working with emergent readers and writers I have become particularly interested in the way they learn language, especially with students entering the *school discourse* (Gee, 1990) for the first time. According to the work by Gee (1990), he uses the term *discourse* when referring to characteristics that make up or identify a person as part of a particular group. For the purposes of this paper, I will use the term *discourse* to describe the first few months of Kindergarten in the public school setting. With this in mind, there is a growing emphasis on the need for school readiness and for teachers to prepare for the different levels of readiness as Kindergarteners enter into this new *discourse* as emergent learners. It is important to consider how the diverse levels of a child’s ability upon entering school for the first time can determine the type of success he or she will have in those first years of schooling. As children begin to make early adjustments, the level to which they adjust to this new *discourse*, will directly affect their learning as well as the teacher’s level of support through this transition.

Within the first year of school, the child’s reading and writing are expected to expand as the child shifts from a *novice* language user to becoming an *experimenter* with language
(McGee & Richgels, 2012). As a novice leaner (i.e., typically preschool to kindergarten) at the emergent stage of language learning, the learner’s writing is represented through forms of scribbles and markings. Children at this stage may recognize letters and make isolated forms, known as graphemes, and they will be able to isolate and say letter sounds, known as phonemes, but they have not yet connected the relationship between letters and sounds (McGee & Richgels, 2012). At this stage, the form of writing used is intentional and demonstrates an awareness of print, but can only convey meaning through contextual dependency, meaning that the child must talk or explain what has been written, rather than allowing the writing to carry meaning on its own (McGee & Richgels, 2012).

In the experimenting stage (i.e., typically preschool to kindergarten) of the child’s life, significant growth occurs in language development. Typically, the experimenter learner enters the school discourse with a greater level of insight to writing because of a high-level of support and exposure to print (McGee & Richgels, 2012). At this stage, the learner uses more conventional forms of writing to experiment with what is known about print. Through this experimenting, the relationship between how letters in written words relate to sounds in spoken words is being formed (Ehri & Roberts, 2006). Depending on the child’s grasp of the malleability of language through experimenting, the child will begin to learn phonemes and graphemes at different rates and the relationship between them. As the child begins to apply this learning to writing, concepts are exposed and it is here that teachers can gauge the child’s understanding and the appropriate levels of instructional support.

According to McGee and Richgels (2012), graphemes or alphabet letters represent the “knowledge of written language forms including awareness of visual properties, spatial directional properties, and organizational formats” (p. 16). The authors defined phonemes as “the
smallest units of sound (e.g., 43 phonemes), that are combined and contrasted...and are the building blocks of words” (McGee & Richgels 2012, p. 9). Through the analysis of writing examples, the use of phonemes and graphemes both together and separately help to identify what stage or stages of spelling development the learner is currently in, and if there is any progress being made. According to McGee and Richgels (2012) any use of the relationship between phonemes and graphemes helps to demonstrate the *meaning-form links* that are connected between the sounds (i.e., phonemes) and the written form (i.e., graphemes). Observations of these behaviors and examining writing samples help to explain the developing ability of *meaning-form links* (discussed further in subsequent section), as well as the breakdowns that may exist for emergent learners. However, although research by McGee and Richgels (2012), Templeton and Morris (2000), and Bear, Invernizzi, Templeton, and Johnson (2008) suggested this staged progression of spelling development, because students enter the school discourse at varied stages in this development, there may be variation in how each student progresses. The shift to more conventional writing may too vary based on the level of teacher support in meeting learners at the appropriate stage of development (McGee & Richgels, 2012).

**Orthography and Spelling**

According to much discussion across the field, the terms *orthography* and *spelling* occur synonymously. According to Bailet (2001) spelling is a complex, language-based skill (as cited in Kelman & Apel, 2004). The view of spelling as a *visual representation* of what the child understands about the relationship between phonemes and graphemes is a key component to spelling. In the field and within the discussion about orthography much research mentioned the development of what Ehri and Wilce (1982), Glenn and Hurley (1993), and Treiman and Bourassa (2000) refer to as *mental graphemic representations* (MGR). Others in the field
referred to MGRs as visual orthographic images or orthographic images (Apel & Masterson, 2001). As previously mentioned, the connection between phoneme and grapheme correspondences influences the development of orthography. However, the MGR theory pointed to the amount of exposure a child received and put into memory as orthographic images that impacted spelling (e.g., the word bucket could be spelled as “buckit,” “buckat,” or “buckut”). According to Ehri and Wilce (1987), learners may rely on their MGRs when insufficient strategies exist among phonemic, morphological, and orthographic strategies (as cited in Apel & Masterson, 2001).

Orthography is much more complex according to McGee and Richgels (2012) and the written form is not the only element to what the child understands about spelling. Owocki and Goodman (2002) confirm this complexity by stating the limitations of information available to researchers in understanding how orthographic knowledge develops. A focus on studying orthographic knowledge has been pinpointed in recent research by Masterson and Apel (2010b) and Puranik and Apel (2010) in order to understand how to better support students struggling in spelling. According to Bourassa & Treiman (2001), orthography is an area of complexity and considered to be merely one source within the acquisition of linguistic knowledge and development (as cited in Kelman & Apel, 2004). Supported in their discussion, Moats (2000) viewed spelling as involving a study of words, “requiring the developing speller to reflect more and more on the linguistic factors that contribute to word spellings” (as cited in Apel, 2001, p. 182), or in other words, the orchestration of multiple influences that govern the written form of language.

Within this complexity of orthography and the multiple factors contributing to language development, an experimenter is linking these different forms of meaning to the written forms
through the connections of phonemes and graphemes by experimenting with the spelling of
words. These *meaning-form links* represent the conceptual aspect to the child’s growing
knowledge of phonemic awareness through the product of writing.

According to McGee and Richgels (2012), phonemic awareness translates to the behavior
of first, the ability to “segment…spoken message into component parts - words [and] then
segment[ing] words into smaller parts - eventually into phonemes” (p. 100). Evidence of this
transition is seen in whispering and sounding out letters when writing. As the child engages in
writing, some form of grapheme represents the sounds heard. Although there may not be a one to
one match (e.g., consonant blends & silent *e*) the child’s orthographic development is evident
through the use of systematically putting word parts (i.e., individual sounds or chunks of spoken
words) together that are associated with individual or combinations of letters (McGee &
Richgels, 2012). However, a key component to the sounds heard by the child while engaged in
writing is the *manner of articulation* in which the way or form of the mouth, tongue, and teeth
form to produce sounds or phonemes (McGee & Richgels, 2012). If the *manner of articulation*
is flawed or if the child speaks a different dialect, the orthographic representation could be
affected. These simple behaviors indicated that the experimenter is busy creating *meaning-form
links* to which “connections between the understanding of language and the processing of visual
characteristics of text” are being made (McGee & Richgels, 2012, p. 384). Although it may seem
less than conventional, these small but complex behaviors lead to a more conventional
understanding, and use of orthographic knowledge the learner is developing.

**Contextual Factors Influencing Orthography**

According to the research by Bourassa and Treiman (2001), Graham (2000), and Scott
(2000), spelling is a self-generative process of linking and symbolizing the structure of spoken
language to its written form (as cited in Apel, 2001). In viewing spelling as a linguistic skill that takes into account not only orthography, but also phonology, morphemes, and word meaning leads to the understanding of the complexity mentioned by Bailet (2001) for the emergent learner’s acquisition of language. Within the research analysis that follows, these guiding theories of linguistic knowledge as an underlying factor of orthography are incorporated by multiple case studies as a significant element in understanding orthographic development.

The field viewed the linguistic nature or factors of spelling as active, moving away from an emphasis on rote memorization and focused on requiring the learner to actively consider sounds, patterns, and the meaning of written language (Apel & Masterson, 2001). These considerations led to what researchers defined as contributing factors to the complexity of trying to isolate orthography from linguistic influences. Because of this complexity, researchers approached understanding orthographic development that included linguistic skill development. Owocki and Goodman (2002) support the multifaceted view of orthographic development occurring in concert with other linguistic units (i.e., sentences, phrases, & words) as well as phonological knowledge (e.g., sound patterns).

In the work by McGee and Richgels (2012), researchers identified four systems of the spoken language (i.e., pragmatics, semantics, syntax, & phonology). According to their work, these aspects are linguistic systems that are unconsciously used by children as they enter the school discourse (McGee & Richgels, 2012). Along with these systems of spoken language, McGee and Richgels (2012) also identified four systems of written language (i.e., functions, meanings, forms, & meaning-form links) that correspond to the spoken systems. The relationship between the spoken and written systems reflects the developing relationship between what the child knows and what the child is learning (McGee & Richgels, 2012).
The research further supported the relationship between linguistics or the spoken word and the written language mentioned by McGee and Richgels (2012). Previously mentioned by McGee and Richgels (2012), sound factors or phonemic awareness, which is the knowledge of speech sounds, or phonemes (i.e., the sound /p/ in the word pie), is a significant factor in the learner’s abilities to express understanding of the orthography through writing. Kim, Apel, and Otaiba (2013) identified three linguistic awareness skills that were unique to orthographic awareness and a predictor of spelling. The results of this study showed “beginning…spellers draw on multiple linguistic awareness skills for…spelling regardless of their level of literacy abilities” (Kim, Apel, & Otaiba, 2013 p. 337).

Working in conjunction with the thinking that occurs as the child represents the phonemes heard, the child is also applying knowledge of morphological awareness (McGee & Richgels, 2012). This is the conscious knowledge of morphemes or units of meaning in language (e.g., articles such as a, an, the, or include prefixes and suffixes). Although writers who are more conventional generally use morphological awareness, evidence of experimenter writers using this awareness may be evident but inconsistent (McGee & Richgels, 2012). In the research by Apel and Masterson (2001) a linguistic skill approach guided a targeted study on spelling achievement focused on phonemic and morphological awareness skill and orthographic knowledge. The results demonstrated significant growth in both the targeted areas and spelling (Apel & Masterson, 2001).

Another influential factor of spelling is semantic awareness or the meaning of words, which acts as another contributing factor in predetermining spelling (e.g., one vs. won). According to Kelman (2004), “a traditional spelling…approach does not promote active, reflective thought about language,” which supports a shifting away from traditional spelling to a
linguistic skill (p. 57). With this shift in mind, McGee and Richgels (2012) supported this view that emphasized meaning of words, or semantics within the Spoken and Written Systems of Language. Their system reflected a correspondence between semantics within the spoken language and the meaning or morphology within the written language system (McGee & Richgels, 2012). Moving beyond limited rote memorization, McGee and Richgels (2012) further explained the significant impact active and reflective thought has on language through the differences between contextualized language (i.e., draws on sources of information outside of words) and decontextualized language (i.e., draws only on words to communicate meaning, not on real-world context). Others supported the emphasis on looking at orthography beyond surface features of writing by focusing on meaning (Owocki & Goodman, 2002). Much of the work collected viewed the experimenter learner as one who is able to write with purpose and meaning. As the child shifts from novice to an experimenter, growth is evident in the use of conventional writing.

Continuing to look at orthography as a linguistic skill for the emergent learner led to the research by Puranik and Apel (2010). These researchers included the implications of orthographic knowledge by reviewing the influences of both print awareness (i.e., print conventions, knowledge of print) and phonological awareness (Puranik & Apel, 2010). Their research supported the challenges and complexity of spelling mentioned earlier through the connections between the relationship of sounds, patterns, and meaning. Yet, what exactly is orthographic knowledge? Kelman and Apel (2004) described orthographic knowledge as “essential for translating spoken language into written form” (p. 56). According to the researchers, orthographic knowledge includes phoneme and grapheme correspondences (e.g., knowing the sound /kl/ can be represented by letters k, c, cc, ch, or qu). In addition, knowledge of
**Orthographic Rules**

Rules are also part of defining what orthographic knowledge is, such as letter combinations (e.g., words with the *qp* combination), which do not exist in English language, as well as understanding the positional limitations of letters and letter patterns (e.g., *ck*), which also never appears in the initial position of a word.

Since the increased emphasis on the interrelationship between reading and writing skills, Ehri (2000) and Treiman (1998) explained that *orthographic* representations provide the outlet for the child to show a more complete mental representation in the understanding of orthographic rules (as cited in Apel & Masterson, 2001). Although McGee and Richgels (2012) pointed out the complexity of orthography, the written form provides a visual explanation to the complex thinking that surrounds spelling and the orthographic knowledge the child is developing.

**Spelling Instruction**

Within the research analysis that follows, supportive theories on spelling instruction, the use of writing and writing assessment further explain the complexity of orthography and the development of orthographic knowledge.

Before examining different instructional practices and ways of assessing students, we must first understand what spelling and word study are and what these can look like within the classroom. First, it should be noted that many agree “spelling is not just memory work; it is a process of conceptual development” (Newlands, 2011, p. 531). Much research is written to support the shifting away from rote memorization toward word study activities in order to understand language and words through a developmental process. According to Donnelly (2013), “Word STUDY is an acronym which stands for: well-known words, sounds, tricks, use a rule, derivations, and years of age” (p. xi). If we take Donnelly’s breakdown and apply it to the
developmental stages of phonology, word-function, meaning, and word-history, this breakdown provides a roadmap for teachers to monitor progress within specific stages of spelling development. These stages of spelling development described by Donnelly (2013) can be coordinated with the stage development described early by McGee and Richgels (2012). By meshing these stages together the layers and complexity of orthography can better define the learner’s development.

According to Williams and Lundstrom (2007), “word study is a relatively new approach to spelling instruction that focuses on [the] active exploration of the principles of English orthography” (p. 205). Active exploration makes up word study, also referred to as word work, and it is these instructional-practice activities that teachers design to build the student’s knowledge of spelling. This active exploration aligns with the research mentioned earlier that suggested shifting away from rote memorization and engaging in a more active and reflective approach to orthography (Apel & Masterson, 2001). These activities include what Williams and Ruth (2007) called Tools of the Trade and Tools of the Mind. The Tools of the Trade include strategies that are used in a physical sense (e.g., word walls, a dictionary, and words in print around the classroom). The Tools of the Mind are considered cognitive strategies (e.g., say the word slowly & listen for sounds, think about spelling patterns, spell the sounds you hear, think of a word you already know, or ask yourself if you can see the word). The basis of these tools is related to Fountas and Pinnell’s book Word Matters (1998), which is specifically written to guide teacher instruction within an active word study setting.

However, in order for these tools and the implementation of instructional practices to be successful, teachers need to understand what some refer to as layers of information (Williams, Phillips-Birdsong, Hufnagel, & Lundstrom, 2009). These layers are represented through
*alphabetic, pattern, and meaning layers* and can help students within the stages of spelling development (Williams, et al., 2009). In the *alphabetic* layering approach, students explore the relationship between letters and sounds by making connections between single and pairs of letters to sounds (Williams, et al., 2009). With these layers of information understood, teachers can develop lessons that strategically target aspects within the appropriate developmental stage(s) of the student. This directly connected with McGee and Richgels (2012) *meaning-form links* and the web of linguistic skills described by Masterson and Apel (2000), Moats (2000), Kim, Apel, and Otaiba (2013), and Kelman (2014). As stated earlier by McGee and Richgels (2012), as children begin to form relationships between phonemes and graphemes, between letter patterns and between semantics across words, these *meaning-form links* reflect their developing knowledge of orthography. Digging deeper into what others said about spelling and word study revealed a thread of continuity across the profession.

Invernizzi and Hayes (2004) stated that:

> Advocates of word study claim that the process of comparing and contrasting orthographic features not only teaches the spelling of specific words but also encourages students to make generalizations about the spelling consistency of other words within a given category. (p. 224)

These concepts of comparing, contrasting, and making generalizations within spelling leads to the wealth of word study activities that teachers are creating in order to help their students uncover the layers involved in spelling development. These active approaches further support the malleability of language mentioned by McGee and Richgels (2012) as the *experimenting* learner makes both *approximations* and *orchestrations* within writing, and shifts toward conventional use and development occurs. In writing, the *approximations* of the experimenting learner have
shifted away from mock letters and invented spelling toward the mechanics of spelling and the
relation between sounds in speech and letters in print (McGee & Richgels, 2012). While
orchestration becomes evident in the experimenter’s ability to coordinate many processes at one
time by shifting to automatic and unconscious conventions, at the same time the child is also
putting forth conscious attention to other aspects of writing (McGee & Richgels, 2012).

Writing Instruction as it Relates to Spelling

Writing provides a lens into the child’s conceptual knowledge of letters, words, phonemic
awareness, orthography, and use of phonics. In other words, “using spelling words to write
messages to others, make lists, develop plans, make signs, write letters…make greeting cards
and write songs and poems help children make meaning through writing” (Alderman & Green,
2011, p. 601). These are authentic ways of allowing students to experience writing with a
purpose and motivate the writing process. Writing can be a very difficult discourse for students,
especially if their spelling development is progressing slowly. While motivation is an important
aspect, providing authentic ways of writing play a significant part in motivating reluctant writers
because it gives them purpose and allows the writers the opportunity to write about their own
interests.

One approach that takes into account both motivation and authenticity is interactive
writing. According to Sipe (2001), “interactive writing is a technique of group composition, [and
is] intended for use with emergent writers” (p. 269). According to the work by Williams and
Lundstrom (2007), interactive writing is an approach for beginning writing instruction in which a
teacher and children co-construct an oral message and then share the pen to get that message into
print. Interactive writing instruction can support young children’s spelling growth and their early
writing development. In their research Williams and Lundstrom (2007) found in addition to
explicit instruction, students also needed guided practice in applying spelling strategies to extended writing. This kind of composition helped to develop students’ motivation towards independent writing through scaffolded support.

According to Alderman and Green (2011) creating spelling lists relative to students’ writing needs are authentic forms of approaching spelling instruction. Alderman and Green (2011) pointed out “students [should] personalize their spelling test… [by] not[ing] words that they misspelled or failed to read correctly… [and can be placed on] private word wall[s]” as a way of taking responsibility for their own learning (p. 603-4). It seems that “when children have agency to write…their potential to show us what they know is expanded” (Owocki & Goodman, 2002, p. 78). From these writing opportunities, teachers can access data that leads to further developing an understanding into the hypothesis with which children are experimenting, such as initial and final consonants, vowels and vowel markers, and or syllable correspondences (Owocki & Goodman, 2002).

In their *Continuum of Literacy Learning*, Pinnell and Fountas (2011) explained that in kindergarten the writing students engage in typically consists of pictures supported by words. Students in this grade use about twenty-five high-frequency words, simple phonogram patterns (e.g., cat, & fat), while also attempting unknown words through sound analysis. As they write or create picture books, stories, and informational writing, students use phoneme-grapheme correspondences by saying words out loud, writing only the beginning and ending consonant sounds they hear and constructs phonetic spellings that are mostly readable. These students also recognize and utilize resources such as word walls and books to support their writing.

Within the *Writing Standards* of the CCSS (2010) anchor five, spelling is focused on through the writing process of *editing*. At the kindergarten level, the conventions include letter(s)
for most consonant and short-vowel sounds and phonetic spelling for simple words (Owocki, 2013). Students are expected to write an argument to support a claim (e.g., My favorite book is...), an informational/explanatory writing piece, a narrative about an experience or event, and a writing project (e.g., explore books by a favorite author & express opinions about them) (Owocki, 2013).

When analyzing spelling, Giacobbe (1998) pointed out the need to “look at what the student knows about writing words, whether frequently used words are becoming automatic, and what does the child need to work on next” (as cited in Pinnell & Fountas, 1998, p. 213). In order to do this, a detailed analysis is conducted by counting all words written divided by the number of words spelled correctly to determine the percent of accuracy. Afterwards, detailed findings are written down such as attempts, use of word endings, inconsistencies with the same word(s), and difficult word conventions. After this data collection and analysis, “spelling instruction through mini-lessons are designed to focus on what the student needs to know” (p. 217).

**Tools for Assessing Orthographic Knowledge**

Although educators value assessment as an important data collection resource for spelling instruction, debate exists regarding the view of the nature, scope, and format of spelling assessments (Westwood, 2009). Within the scope of assessment, the variety ranges from cognitive, test-based approaches, and norm-referenced testing, to more holistic approaches such as writing. While these assessments are meant to inform teacher instruction, a substantial amount of data seem to fall to the wayside because of the misguided focus on spelling achievement rather than the analysis of orthographic knowledge. The research that follows represents both a test-based (i.e., prescriptive) and a holistic (i.e., writing) approach to spelling assessment. Surprisingly, much of the research found that the complexity of assessing orthographic
knowledge warranted the use of both test-based and holistic formats in order to develop a whole understanding of the child’s knowledge about spelling.

**Prescriptive Approach**

In the work by Masterson and Apel (2010a), the researchers used *Test of Written Spelling 4* (TWS-4) (Larson, Hammill, & Moats, 1999) as an assessment tool. In addition, the researchers used a spelling curriculum; the *Saxon Phonics and Spelling Curriculum* (Saxon; Simmons, 2003) and the multi-linguistic prescriptive approach; *Spelling Performance Evaluation for Language and Literacy* (SPELL; Masterson, Apel, & Wasowicz, 2002), in which sample words at appropriate developmental-levels elicited the identification of orthographic patterns not yet mastered. This tool does not apply to student-produced writings, yet it identifies specific deficits in phonemic, orthographic, morphological, and semantic awareness, along with poorly developed MGRs. The approach is markedly different from common practice of memorization in that the instruction is based on a prescriptive assessment that identifies the deficits in underlying linguistic sources of knowledge and the use of instructional strategies to fit the specific deficits. The linguistic strategies that can be applied to spelling words are the focus, as opposed to a primary focus on memorization of specific words. The analyzed results identified problems by taking into account omissions in phonemic awareness, illegal (i.e., rule breaking) misspellings as difficulties in orthographic knowledge, and legal (i.e., rule abiding) misspellings as deficiencies in storing (i.e., putting into memory) MGRs, as well as affixes (i.e., part added to a word) as an identifier of problems with morphological knowledge. According to Masterson and Apel (2010a), when educators rely on prescribed lessons, students may receive instruction for spelling patterns for which they already demonstrate competency while not receiving instruction on patterns that are not mastered. Conversely, when a prescriptive, multi-linguistic assessment
approach is applied, spelling deficits are identified and specific lessons, tailored to the student's spelling needs, are provided (Masterson & Apel, 2010a).

In a similar work by Masterson and Apel (2010b), the researchers developed *Spelling Sensitivity Score-Word* (SSS-W) and a *Spelling Sensitivity Score-Element* (SSS-E) coding system with specific word tasks (e.g., cat, house, baby, when, time), similar to *Developmental Spelling Inventories* (Bear, 2000) assessment which identified students’ developmental changes in spelling knowledge overtime. The results indicated that children’s spellings in response to a spelling dictation task revealed that the *Spelling Sensitivity Score* systems (Masterson & Apel, 2010b) was more sensitive for noting general and specific developmental changes across the year. The researchers included the percent correctly [spelled] words (PCW), which focused only on complete spelling accuracy, and was unable to detect improvement in students’ overall spelling ability. However, because Masterson and Apel (2010b) focused on the underlying linguistic knowledge children can apply to their spellings and its detailed analysis procedure, the SSS captured statistically and clinically significant changes in spelling development using broad measures of spelling ability (i.e., SSS-W and SSS-E). Masterson and Apel (2010b) also found that for kindergarten children, the greatest change appeared to be an increasing appreciation for orthographic conventions.

In the work by Puranik and Apel (2010), the researchers used spelling lists to identify stages of spelling development (Apel, Wolter, & Masterson, 2006) based on three spelling tasks. To score the tasks, a 7-point scale (i.e., modified from the Tangel and Blachman, 1992, model) rubric allowed for data collection on writing tasks of spelling ranging from no response and scribbling to conventional spelling. The scale identified wrong letter usage, initial letter identifiers, spelling two thirds of related phonemes but without repetition of same letter (e.g.,
ler for letter), and attempts to represent vowels. Children in this study were asked to spell single words using letter tiles (tile spelling), spell orally (oral spelling), and by handwriting (written spelling). The results of this study showed how spelling ability was highly sensitive to letter writing ability. Specifically, spelling performance was affected by the assessment task but only for the younger children with lower levels of letter writing ability. Once young children had the ability to write a majority of the letters of the alphabet (i.e., 19 letters), the task did not matter; they spelled equally well across all three tasks. The results of Puranik and Apel’s (2010) study point to the important role of orthographic knowledge in spelling, even for beginning or emergent writers. It further showed the significance of assessing letter writing skills as an indicator of children’s developing orthographic knowledge and provided evidence for the use of alternative methods to assess spelling knowledge.

Through these prescriptive approaches, researchers used a variety and a combination of assessment tools. These researchers recognized the deficiencies of rote memorization tests and leaned towards these prescriptive assessments as a way of pinpointing deficits in the child’s orthographic knowledge and ability. The goal focused primarily on deficits in order to guide instruction that focused on the gaps in the child’s understanding of orthography and contend its worthy goal in comparison to spelling tests that simply identify right or wrong rather than waste time on instruction that focused on skills already understood.

**Holistic Approach**

In contrast to the prescriptive approach to assessing deficits in the orthographic knowledge of an emergent learner, the holistic approach used a broader lens in understanding the orthographic development of the child. As the early researchers pointed out, the traditional spelling tests tend to simply identify right or wrong spelling achievement, which can lead to
wasted instructional focus and repeated instruction for concepts already achieved. The researchers who promoted a holistic approach also agree with a shifting away from the traditional rote memorization, but placed value on collecting data from student writing samples in addition to prescriptive assessments. These researchers see the benefits of analyzing writing samples that are authentic representations of how the child uses language to communicate.

In another work by Apel and Masterson (2001), the researchers used the Test of Written Spelling-4 (TWS-4) (Larson, Hammill, & Moats, 1999) approach as well as included an assessment for authentic writing. The results showed that Minnie’s (participant’s pseudonym) misspellings were due to insufficient orthographic knowledge, 20% of the participant’s misspellings suggested a deficit in phonemic awareness, and almost another 20% indicated difficulties using morphological knowledge. Very few misspellings (5%) appeared to be due solely to reliance on poor MGRs (Apel and Masterson, 2001). Identified deficient linguistic areas seemed to contribute to the misspellings, including phonemic and morphological awareness, orthographic knowledge, and adequate MGRs. To further examine these areas of concern, Apel and Masterson (2001) conducted supplemental testing of phonemic and morphological awareness, as well as had the participant read both nonsense and real words. After the pre-assessment was conducted, the performance results guided the intervention that focused on the child’s ability to use self-discovery, integrated approaches to spelling instruction, self-regulation, and self-esteem. Deficiencies in these areas were focused upon within the intervention. The results from Apel and Masterson’s (2001) post-assessment indicated an increase in scores as a result of the activities and procedures used in the intervention program. The child appeared to develop advanced understanding and use of specific strategies underlying the spelling process with increased accuracy of spelling and decoding of single words. However,
spelling and decoding skills did not develop sufficiently to the level where she was able to spell and read accurately independent of support and guidance. As for the authentic writing samples, Apel and Masterson (2001) found that although the post-assessment indicated an increase in words spelled correctly, the analysis did not do beyond identifying error versus words written and number of one and two syllable words. In a case such as this, additional intervention would be warranted to help the student with these skills and strategies.

Kelman and Apel (2004) used the *Spelling Performance Evaluation for Language and Literacy* (SPELL; Masterson, Apel, & Wasowicz, 2002) as well as the number of words divided by misspelled words equation, to assess students’ spelling in authentic writing samples. For the purposes of this section of the paper, I will focus on the results from the authentic writing samples. During the initial assessment, the student was asked to retell a story in writing. The narrative consisted of 154 words, 41 of which (27%) were spelled incorrectly (Kelman & Apel, 2004). The student was given two other written assignments in different writing genres. For the first assignment, the student wrote a narrative about her Barbie™. The second assignment was an opinion essay. The narrative about Barbie™ contained 372 words, with 92 spelling errors (25%). In the opinion essay, the student used 102 words, 40 of which (39%) were spelled incorrectly (Kelman & Apel, 2004). When asked to find the words spelled incorrectly the student identified 75% of them in both assignments; however, she was unable to correct these misspellings. Based on these results intervention focused on two specific orthographic rules and patterns (i.e., long/short vowels and “r-controlled” vowels) and phonemic awareness (i.e., particularly blending and segmentation). The researchers noted time constraints caused the intervention to focus only on deficits identified in the initial writing assignments. In the post-intervention writing assignment about the first day of school, the essay consisted of 223 words and contained
36 spelling errors (16%), and indicated a reduction in misspelled words from her pre-intervention samples (26%) (Kelman & Apel, 2004). Furthermore, the student identified and corrected some spelling errors. Most notable was the student’s ability to change words containing the *ir* vowel, which was a targeted focus in the treatment.

Another more holistic approach to student-produced writing is the growing emphasis on rubrics. According to Shapiro (2004), rather than giving students tests, the research showed when given opportunities to express themselves, students’ writing can be focused and creative. Within the rubric system promoted by Shapiro (2004), student-produced artifacts are used to assess writing based on 6-Traits: topic development, organization, details, wording, sentence, and mechanics. The assessment of orthography lies within both the word choice or wording section and within the conventions or mechanics sections of the 6-Traits rubric. This aligned the assessment approach with the earlier discussion on the underlying influence of orthography through the linguistic skill of semantic awareness as well as the orthographic rules that guide the research about assessing orthography. According to Shapiro (2004), two important benefits are that the rubric system allowed teachers to identify both the strengths and weaknesses of the students and how the teacher could set up flexible groups according to the students’ needs.

Secondly, the rubrics allowed teachers to look at the strengths and weaknesses of the whole class, according to each trait. From this information, the teachers could determine which trait needed to be targeted for whole class instruction. Not only had the traits become a framework for assessment, but they also were the driving force for instruction.

Through these holistic approaches, researchers like those conducting prescriptive assessments used a variety and a combination of assessment tools in order to fully understand the students’ orthographic development. These researchers also recognized the deficiencies of rote
memorization tests and leaned towards assessments that offer a deeper analysis of the working knowledge that surrounds orthography. By allowing writing opportunities outside of prescriptive assessments, a deeper lens supported the intervention design and instructional practices used to support students’ needs. However, the researchers in both the prescriptive and holistic approaches failed to collect data or analyze the orthographic knowledge of what the learner understands or almost understands. This is a significant gap in both approaches, because this information provides formative assessment necessary for guiding instructional practices. Although the potential for this data collection is available in both the prescriptive and holistic approach, it seems as though the researchers using student-writing samples would be able to more fully develop an understanding that is truly holistic of what the emergent learner’s orthographic knowledge.

**Conclusion**

After reviewing the literature surrounding orthographic knowledge for the emergent learner, research revealed the layers of complexity that exists surrounding this topic. Furthermore, the research brought some continuity in what orthography is and what the instruction should consist of. Collectively, a shifting away from rote memorization was emphasized as researchers engaged in an active and reflective process of allowing teachers to use both prescriptive assessments in conjunction with authentic writing opportunities as a means to assess orthographic knowledge. Although the research was varied in which tools best suited the assessment of orthography, it was apparent that the researchers predominately used multiple forms in order to find a balanced approach that honored both explicit instructional approaches, supplemented by student-produced artifact assessments. Furthermore, the research concluded that unlike writing samples, dictated spelling lists preclude students from avoiding words they do
not know how to spell.

However, the research from both approaches failed to collect or analyze data on what the child understands or almost understands about orthography. Therefore, the case study that follows will include data collection and analysis through a holistic approach that uses student-produced writing samples to explore the orthographic knowledge of one kindergarten student in order to identify areas of focus, including both understandings the child exhibits as well as areas the learner almost understands. This analysis will guide the orthographic instruction the learner receives in order to understand the learner’s orthographic development over time.
Chapter Three: Methods and Procedures

As a new teacher and literacy specialist, I have a growing interest in how language develops for emergent learners and how these learners’ understandings are applied to writing. Through writing samples, teachers have the opportunity to assess what orthographic knowledge a child is utilizing to support writing. However, often, spelling assessments are the source of this important data rather than writing samples. And when writings are used as a data source, the contents are typically controlled, restricting the learner’s language use and authenticity. With these factors in mind, I think that as a new teacher I want to provide authentic learning opportunities for my students. I also think a study focused on instruction and assessment of authentic writing samples from an emergent learner developed my own spelling instruction as well as provided a deeper understanding into the working orthographic knowledge of one emergent learner.

The main purpose of this qualitative study, as stated in Chapter One, was to examine how spelling instruction impacted Sophia (all names are pseudonym), when the instruction was focused on the orthographic knowledge represented or perhaps not represented. Through this in-depth case study, I gained insight into the following question:

How might spelling instruction focused on analysis of an emergent writer’s unconventional spellings in authentic texts impact her orthographic knowledge?

Participant

The focal child for this case study was Sophia, a six-year-old girl who was in the third quarter of 2013-2014 school year in Kindergarten. Sophia comes from a middle class family and has two older brothers, Micah, eleven and Aden who is thirteen. Sophia’s father is a disabled Marine Corporal. He completed almost ten years of service before he incurred an injury
in a bombing in Iraq. Sophia’s mother is a stay-at-home mom who is an active part of all her children’s schooling.

Sophia comes from a multicultural background, with a father who is Puerto Rican and a mother who is Caucasian American. Sophia’s father speaks Spanish and will on occasion say a greeting or comment in Spanish. Her father also informally teaches Spanish words to Sophia through playtime or family conversations. All three children also receive Spanish instruction at their schools.

Sophia attends an International Baccalaureate Primary Years Programme, IB-PYP Elementary School in suburban Upstate New York. Sophia’s Kindergarten classroom engages in typical literacy activities including handwriting practice, Guided Reading lessons, reading aloud, Writer’s Workshop, sight word review, and nursery rhyme stories. For homework, which is strictly optional, assignments include practicing handwriting, reading photocopied nursery rhyme booklets, and reviewing sight words.

**Context of the Study**

At the time of the study, I was employed as a private tutor with the company Professional Tutors of America (PTA) (1983-2012). This study focused on a six-year-old emergent learner who received supplemental academic support at home after school through PTA. The sessions were one hour long and took place twice a week, for a period of seventeen weeks. This academic support was based on a scholarship award that Sophia’s parents applied for through Folds of Honor (2007). Folds of Honor (2007) is an organization that supports families of fallen or disabled soldiers, which Sophia’s father qualifies for because of his service in Iraq. The Folds of Honor (2007) organization’s mission is to “provide healing, hope and an opportunity for dreams to be realized…to ensure no family is left behind” (Folds of Honor, 2011). Folds of Honor
(2007) contracted PTA to fulfill the scholarship awarded to Sophia.

Although I have been working as a private tutor for Sophia’s brothers since 2012, my work with Sophia began at the start of the September 2013-2014 school year. The primary academic focus under PTA was reading and math content. However, lessons also included handwriting, spelling, and writing. In addition, although lesson design and specific content was at my discretion, I tried to align content with the CCSS (2010), grade-level appropriate materials, and what Sophia’s teachers communicated home via newsletters. Daily lessons focused on emergent literacy context in order to adequately support the learner as she developed as a reader and writer.

**My Positionality as the Researcher**

I am a female, in my late thirties and from East Indian descent. I was educated in middle-class suburban schools in Queens, New York and Acworth, Georgia. During my schooling in New York, the demographics of the school population were diverse and included a mix of ethnicities. In Georgia, the student demographics were predominately Caucasian. In 1994, I entered the work force as a high school graduate. In 2012, I earned a Bachelor of Science degree from the State University of New York at Brockport and became a certified elementary and special education teacher in grades one through six. I also pursued further teacher certification in birth through kindergarten. Currently, I am working toward a Master’s Degree in Literacy grades birth through twelve at the State University of New York at Brockport.

Professionally, in 2012, I began working as a tutor for PTA. Through this position, I have supported elementary and middle school students in their homes in a one-on-one setting. PTA uses Scantron Performance Series Web-Based Diagnostics (2013-2014) as a benchmark assessment for students from first grade and up. For kindergarten students, PTA provided a
paper-based Achievement Series Pre-Test and Post-Test (2013-2014), which included identifiable learning objectives. My own informal assessments also help to provide feedback on student progress and support lesson planning. In addition, I developed a more formal mid-semester assessment utilizing the Scantron Performance Series Web-Based Diagnostic tool.

I am currently also a substitute teacher in urban and suburban schools in Upstate New York. The students I work with come from both middle-class and lower socioeconomic statuses, and include a wide-range of ethnicities including minority groups. The grades range from kindergarten to twelfth grade and include both general education and special education populations.

As a new literacy teacher and professional, I believe that language development in any form, whether it is in reading, writing, speaking, or listening are essential for continued learning throughout life. Throughout my education and profession, I have developed my own philosophy of education and literacy. Guided by theories of scaffolding (Vygotsky, 1978), I believe in providing adequate support for all learners at all stages of the learning process. I also believe that informal assessments are a key element in helping to guide teacher instruction and support the framework for learning through the Gradual Release of Responsibility (GRR) model (Pearson & Gallagher, 1983). Combined, I think these theories support all students throughout their learning by following the GRR (1983) framework through modeling, thinking-aloud, collaboration, and independent work. The GRR (1983) model is cyclical and allows flexibility (Fisher & Frey, 2012) and as students are exposed to concepts, teachers are able to step in and out of the learning process. By providing support appropriately and assessing student progress with the flexibility to adjust the instructional framework, feedback provided by students can lead to teachers making modification to their instruction. This formative type of feedback helps to support students as
they move forward in their learning.

Data Collection

The purpose of this study was to understand how spelling instruction that was informed and designed to address the analysis of Sophia’s orthographic knowledge within authentic writing samples influenced her spelling development. In order to conduct a thorough analysis, I collected and analyzed student-writing samples, kept research journals, took observational notes, as well as made digital audio-recordings, and reflected on spelling instruction using qualitative research methods. I anticipated that my analysis of these documents would provide me with some important and informative insight into how I could meet the emergent learner with appropriate instructional needs.

Observational Data

The first source of data was the observational notes of the participant’s interactions and behaviors during the writing process. As the child was engaged in the act of writing, data collection consisted of both field notes and digital audio-recordings.

When the child participated in a writing assignment, I used a double-sided observation protocol to collect data. Within the double-sided journal (appendix A), the top part of the form included, the date, time, and duration of the observation. On the left side of the journal-entry, I collected data that included detailed descriptions of the child’s observable behaviors as well as physical behaviors that may or may not be evident through digital audio-recordings. I also observed and recorded behaviors relative to writing techniques and lip and tongue positioning. On the right side of the journal-entry, I collected data that included teacher interactions and behaviors such as verbal cues, prompts, questioning, and any evidence of explicit instruction given to the child as she writes. Within the bottom half of the journal, I also had a section for
teacher reflection. This part of the journal-entry was reserved for completion after the writing assignment has been completed as a form of synthesizing the observational setting as a whole.

During each observational setting, I also conducted digital audio-recordings. These recordings were considered an important tool in collecting data that may have been missed as I took hand-written field notes. These recordings supplemented the observational data collection as I transcribed the recordings and inputted any data of comments, utterances, and conversation that may not have been originally recorded within the initial observational setting.

**Writing Samples**

The second source of data collection was the student’s writing samples. To protect the student’s identity the student’s name was removed before any analysis was conducted. Upon each writing assignment or activity during the six week observational period, copies of each writing sample were made in order to analyze the student’s working orthographic knowledge. From these writings, I used a coding method in order to identify areas of approximations, understandings, and misconceptions the child was making within the conventions of spelling. Furthermore, the data collected pertained to phoneme-grapheme correspondences, single and multisyllabic word usage, and other spelling features such as long and short vowel sounds, word endings, present, and past tenses. Although the focus was on collecting orthographic indicators, other writing conventions were identifiable trends such as spatial adherence, directionality, and punctuation that may need to be addressed.

**Teaching and Learning Episodes**

The third source of data collection was a reflective aspect from each teaching and learning episode. Each instructional lesson plan was expected to last for about fifteen minutes followed by an opportunity for the participant to engage in a writing assignment or activity.
After each instructional lesson episode I used a double-entry journal. On the right side of the journal, I had the lesson plan outline that I used as a guide during instruction. On the left side of the journal, I collected detailed descriptions of the child’s observable behaviors during each writing episode that followed an instructional lesson. Digital audio-recordings were also transcribed for each of these instructional lessons in order to capture all essential data that may have been missed in the observational field notes. On the bottom half of the journal entry I included a teacher reflective component that allowed for lesson adaptations and instructional adjustments that was necessary to inform my instructional practice. The reflection component allowed for spelling instruction and delivery that adequately met the emergent learner at the appropriate stage of spelling development.

**Data Analysis**

As data were collected from participant observations and behaviors, writing samples, and reflections of teacher and learning episodes, constant comparison analysis between data points was performed (Hubbard & Power, 1999). The analysis was conducted through a simple coding system of identifiable spelling features that were determined to be consistent, new, or misused. Other indicators of spelling behaviors also represent what the learner was ready for next. In addition, the analysis provided details regarding evidence on whether or not authentic writing opportunities were an adequate tool for assessing the development of orthographic knowledge as well as evidence of improvement based on lesson plans designed to meet the needs of the learner. The coding system identified themes across the data points in order to provide a visual representation of patterns across all data points in search of answers to this research question:

How might spelling instruction focused on analysis of an emergent writer’s unconventional spellings in authentic texts impact her orthographic knowledge?
Observational Data

As the participant engaged in each writing assignment, I observed and recorded evidence relevant to her working orthographic knowledge, writing strategies and any evidence of both verbal and physical behaviors exhibited. After each instructional lesson I expected to find evidence that the child’s orthographic knowledge was impacted by the spelling instruction she received. However, I also analyzed the data of various orthographic features within spelling to understand how and if the child’s knowledge was shaped by the instruction she was receiving. These observations were coded across each session in order to identify patterns and themes within observable behaviors that influence the child’s orthographic knowledge.

Writing Sample

The participant’s authentic writing samples offered a rich source of data. Copies of these writings were analyzed in search of deeper conceptualization of the child’s orthographic knowledge as evident in her writing. Evidence included but was not limited to the following: words and spelling by using only initial and final consonant sounds, vowels and vowel markers, spelling patterns, multiple spellings for words, spelling rules, and syllabic representations. A simple coding system was used to group orthographic evidence in a cohesive and manageable manner that could be addressed within spelling instruction appropriate for emergent learners.

Teaching and Learning Episodes

Through constant reflection, I uncovered and developed my instructional practice as an elementary teacher and literacy specialist. From the data collection and analysis of all observational notes and digital audio-recordings during and after spelling instruction and writing activities, I was able to feed-forward (Fisher & Frey, 2011) the child’s learning though appropriate instructional adjustments. Through reflection, deeper thinking about how my
instruction directly influenced what the child may or may not quite be ready for. I wanted to enhance my ability to provide spelling instruction that helped the student at the instructional-level, which meant I must look for observable feedback as an informal assessment but formative tool to determine whether my instruction was appropriate or not. Evidence from my analysis would also tell me if authentic writing opportunities were an adequate tool for assessing the development of orthographic knowledge. I suspected that if I was not seeing evidence of improvement then my instruction was not meeting the needs of the learner.

In order to determine whether my spelling instruction was in fact, being incorporated into the child’s orthographic knowledge, lessons were guided by the instructional practices on teaching phonics and spelling through multiple sources. These resources included, *Word Matters* by Pinnell and Fountas (1998), *Word Journeys* staged development by Ganske (2010), *Words Their Way* by Bear, Invernizzi, Templeton, and Johnston (2011), and *Literacy’s Beginning* by McGee and Richgels (1996). The spelling focus was based on what I had previously observed that the child had not yet conceptualized as evident in her writing. After analyzing the student’s writing samples, if evidence of this new spelling feature was found after the lesson then there was initial evidence that the lesson was impacting the child’s orthographic knowledge. Furthermore, if the writing sample coding presented consistent evidence of repeated use of the spelling features, then the evidence suggested the lesson had successfully been conceptualized into the child’s working orthographic knowledge. Although, there may not be a one-to-one match between what was taught and what the child learned, this indicated that more time and repeated experiences were necessary for the child to internalize the knowledge and skills. For my analysis, it would then be necessary to look for any changes over time, not simply after a particular lesson.
Procedures

The data collection for this case study tool place over a six-week period. The following was my plan for collection:

Week 1

− Begin writing research journal entries of observable behaviors
− Begin digital audio-recordings of participant during writing
− Begin to analyze writing samples after day two
− Develop 1st a 2-day lesson plan based on analysis of writing samples

Weeks 2 – 6

Day 1

− Implement day 1 of lesson plan
− Continue writing research journal entries of observable behaviors
− Continue digital audio-recordings of participant during writing
− Reflect on teacher instruction
− Make lesson plan adaptations for day two

Day 2

− Implement day 2 of lesson plan
− Continue writing research journal entries of observable behaviors
− Continue digital audio-recordings of participant during writing
− Reflect on teacher instruction
− Develop the following week’s 2-day lesson plan based on analysis of writing samples
Criteria for Trustworthiness

As a teacher-researcher, I was committed to conducting this case study with proficiency, accuracy, and validity. Since this study would directly influence my future student observational skills, my lesson plan development, and spelling instruction, I needed to ensure that both my data collecting and data analysis were conducted in the most creditable manner. To make certain of trustworthiness, I used a prolonged six-week engagement study period. During this six-week period, I conducted persistent observations by keeping a regular schedule of biweekly tutoring sessions lasting a minimum of twenty-five minutes. With the observational data, writing samples, and teaching and learning episodes a triangulated approach of consistency across multiple sources allowed recurrent themes to be ascertained. Moreover, to maintain trustworthiness, I maintained honest and detailed reflections in my research journals that accurately depicted all reflections and occurrences. Above all, by using an objective lens when reviewing all data sources, I did not let my bias or any anticipated findings influence the case study results.

Limitations of the Study

There were limitations to this study. Since this study only focused on one student, I was limited in making broader generalizations on the impact this approach and the affects my instruction would have on larger participant groups. In addition, since, I am the researcher and the instructor, my interpretation, personal biases, and familiarity with the participant may have interfere with the results, although I did my best to stay objective.

Summary

The purpose of this qualitative case study was to explore how spelling instruction that was focused on one student’s unconventional spellings in authentic texts impacted her
orthographic knowledge. I developed my understanding of my own instructional practices as well as gained insight into the cognitive thinking behind the orthographic behaviors exhibited by the child. I utilized research journals, digital audio-recordings, lesson adaptations, and reflections collected for a duration of six weeks to identify understandings, misconceptions and areas that the child almost comprehended. My findings helped to develop my lesson plan development and implementation of spelling instruction and how they influenced an emergent learner in her writing and spelling.
Chapter Four: Analysis and Interpretation of Data

Introduction

This case study started with me wondering how I might use authentic opportunities for writing to meet learning objectives for my student Sophia (all names are pseudonym), while also allowing her to engage in what motivated her interests. I wanted to understand more about how I could help Sophia expand and deepen her understanding of orthography by designing lessons that specifically pinpointed areas of focus within her own writing. The main purpose of this qualitative study allowed me to examine how spelling instruction impacted Sophia, when the instruction was focused on the orthographic knowledge represented or perhaps not represented in her writing. Through this in-depth case study, I gained insight into the following question:

How might spelling instruction focused on analysis of an emergent writer’s unconventional spellings in authentic texts impact her orthographic knowledge?

In order to conduct a thorough analysis, I collected and analyzed student-writing samples, kept research journals, took observational notes, as well as made digital audio-recordings, and reflected on spelling instruction using qualitative research methods over a six-week period between May 2014 to June 2014. The insight into Sophia’s orthographic thinking was revealed in brief writing samples across this six-week period. During this study, there were a few major themes that emerged throughout the analysis of the data I collected, through my observational notes, and lesson plan reflections. The first theme found was patterns of authentic writing opportunities that linked motivation to student behavior. The second and third themes revolved around spelling patterns within word sort activities that reflected moments when the student recognized spelling patterns in her writing and other times when she did not. The fourth theme was word-solving actions or strategies that the student exhibited consistently or inconsistently.
Theme 1: Authenticity of Writing

I wanted to ensure that each writing session offered Sophia authentic writing opportunities in order to capture her language use with topics she was motivated or interested in writing about. At the start of our first session (05/19/14), I asked Sophia to make a list of topics she would be interested in writing about. Her list consisted of dog, cat, duck, fish, bunnies, snakes, sharks, math, lions, and bats (Figure 1). This list was not at all surprising, because Sophia enjoyed reading about animals, something I noticed from previous sessions. My intention was by no means of sticking to the list we created, but rather, comprising a list as a point of reference should the need arise for Sophia’s sake in order to prompt her thinking and writing. By giving Sophia authentic writing opportunities, I hoped I was giving her a purpose for writing while also informing me of what she knew (Owocki & Goodman, 2002). Of the five writing samples collected, four stayed within the comprised list of ideas.

Inauthentic Moments in Writing

While I set out to provide authentic writing opportunities, I recognized through my analysis that I inadvertently influenced Sophia’s writing content and topics. Although some writing topics extended for two sessions, at the beginning of each new writing task, Sophia was given the opportunity to choose her topic. On occasion, Sophia used her original list as a checklist, but not always. Other times, what I realized was that I may have influenced Sophia’s choice, because weekly tutoring services through
Professional Tutors of America (2012) included the work and instruction for this case study. With this, sometimes the topic of discussion from reading lessons carried over to her writing lessons. This occurred on the third writing task (06/10/14). The tutoring session included reading a realistic fiction picture book, *Stellaluna* (Cannon, 1993) about *bats*. Thinking back to my read aloud picture book choice, I purposely focused on choosing a book that was originally listed on Sophia’s topic choices. I wonder now after the fact, when I consider that her writing was influenced by the book choices, did I truly provide an authentic experience or not? Although, Sophia’s story was nonfiction, intending to teach her readers about bats, fictional characteristics appeared such as talking bubbles (06/16/14) for the *bats* to have a conversation with each other (Figure 2). This directly linked Sophia’s writing to the read aloud and the type of writing Sophia was engaged in.

On the other hand, during the fourth writing task (06/17/14 & 06/23/14), although Sophia’s writing was again influenced by the prior read aloud of the nonfiction book, *Whales, Dolphins, & Sharks* (Creative Edge, 2009), Sophia chose to write a nonfiction book about *sharks*. Two interesting observations occurred during this writing. First, Sophia was expressive in responding to the pages that contained pictures and facts about *dolphins*. Here, her comments included, “Ahh, dolphins!” and “This one looks like he is smiling, haha” (06/17/14). Secondly, even though she was presented with a book that contained three topics to write about, and
considering her responsiveness to the dolphin pages, Sophia still chose to write about sharks. This caused me to really question whether she was really writing based on interest and motivation, evidence being that she seemed so much more motivated by her responsiveness to the dolphin pictures. Also was it my prompting that caused her to think she had to stay with the topic of sharks, because that was what she listed as a writing topic and because I said, “So, will you change your writing topic to be about whales or dolphins, or are you sticking with sharks, like you originally wanted?” (06/17/14). Thinking back, I wonder if these few incidents influenced the quality of authenticity I offered Sophia in each writing task. The question I began to wonder is what is authentic writing? Is it cold writing where the child picks up a pencil and writes without a mini-lesson, read aloud and teacher interaction, or is it a writing opportunity that the student is able to write at will, whether it is related to previous lessons, or not? As I continued to analyze the data, I was able to delve deeper into what constitutes as authentic writing in this case study.

A More Authentic Approach

Besides writing that followed possible influential content such as mini-lessons or read alouds, Sophia also experienced writing opportunities that were not prompted by books or other teaching tools. In the first writing session (05/21/14), Sophia immediately expressed her interest in writing a story about her dog, Dagger. This initial writing task provided the jumping off point (e.g., long e, double vowels, & compound words) for the analysis needed on Sophia’s working orthographic knowledge (05/21/14). This analysis then guided the spelling instruction that followed for each case study session. In this writing task about her dog, Sophia freely wrote without the influence of spelling instruction, prompting, or any indication of what I might be looking for. With that said, her writing reflected behaviors in what McGee and Richgels (2012)
term, the *experimenter* writer. As an experimenter, Sophia exhibited how she had moved beyond the cusp of novice writing by using conventional forms of writing to experimenting with what she knows about print. Through this experimenting, Sophia exhibited the relationship between how letters in written words relate to sounds in spoken words (Ehri & Roberts, 2006) (Figure 3). This was evident in her adherence to phonemes-grapheme representations in spelling (e.g., *frisbie* for *frisbee*, *allot* for *a lot*, *larrn* for *learn*, & *flowwers* for *flowers*) (05/21/14). In this particular writing sample, her knowledge as an experimenter was authentic because the influence of spelling instruction had yet to cause her to consciously think about her spelling, and instead, she just wrote for the enjoyment of telling her story of Dagger and Sophia.

From my exposure of working with students in a variety of grades and classroom dynamics, one common theme that resonated was how much motivation played a key component in writing. One of my goals for this case study was to link what I knew about how authentic writing opportunities tend to increase student motivation. Although Sophia was a motivated student based on her positive attitude and interest, it was her motivation which was evident in Sophia’s second writing task (05/30/14), which was purely of her own choosing and again not influenced by outside prompting from books, read
alouds, or other teaching tools. Her topic to write about was math. In her writing, indicators of motivation included the length (e.g. six pages) and number of words (e.g., eighty-nine words), the audience engagement Sophia invoked through the questions posed to the reader, and the personal connections Sophia made to the characters included (Figure 4).

This writing task was about learning math (05/30/14), which was a subject that Sophia understood very well. In this writing, Sophia exhibited a higher number of words written than any of the other writing tasks, perhaps evident in both her ability and comfort level with the topic. Here, she also chose not to use illustrations to accompany her writing, but rather she chose just to write.

The most significant difference in this writing piece than some of her other writings, was the level of audience engagement involved (05/31/14). This proved directly connected with interactive writing, one approach that takes into account both student motivation and authenticity. Sophia engaged her audience by asking questions and waiting for a response from me. In my responses, I answered in simple language by writing the numeric answer to a mathematical question or simple, short sentences. In one instance, I noticed that Sophia spelled *peases* for *pieces*, so in my response, I spelled *pieces* conventionally as a prompt to see if she would go back in her own writing and correct her spelling (05/30/14). It was interesting because Sophia was able to read the word *pieces* fluently the way I spelt it, but she did not go back in her own writing to correct the unconventional spelling (Figure 5). This caused me to wonder whether she noticed she spelt it unconventionally, or was she unaware of the differences. I also wondered if
Sophia had begun to grasp the malleability of language through experimenting, and begun to realize phonemes and graphemes are used at different rates and the relationship between them varies. If that was the case, did she not realize our spellings differed or did she accept both *peases* and *pieces* as conventional forms of the same word? Although it is common for learners to use inventive spelling to support their writing, Sophia seemed to be monitoring her spelling based on what she remembered from past reading and what phonemes she heard and ignored the visual cue.

The other indicator of this writing task as an authentic writing opportunity was the personal references made by Sophia (Figure 6). In this writing task, Sophia wrote not only to make her writing authentic for the reader, but she also included a reference to her best friend from school. This form of authentic writing that connects the writer with the content being written was also evident in the final writing session in which Sophia wrote about plans for her family’s summer vacation (06/24/14). By both engaging with her audience and writing with personal connections, it appeared that authentic writing opportunities motivated Sophia to express herself freely (Figure 7). This allowed for not only analysis into her writing and spelling, but because she wrote about math content, an area in which she felt accomplished, rich text was provided to understand the orthographic behaviors and motivations guiding Sophia’s writing.

While I originally set out to find how my instruction might influence Sophia’s orthographic knowledge, I found an emerging theme of *authenticity* that allowed me to take a
holistic or all-inclusive point of view to Sophia’s orthographic understanding. I realized through my analysis, if I failed to recognize the theme of authenticity, I may have ignored how my instructional approaches influenced Sophia’s writing. I further realized my lens into Sophia’s spelling knowledge would be limited to areas of focus that stretched Sophia beyond what she was capable of producing on her own. By allowing a mix of both authentic and inauthentic motivations and opportunities, I could both stretch Sophia’s orthographic knowledge on some occasions as well as let her write comfortably in her zone of proximal development (Vygotsky, 1978) that allowed for her success and enjoyment as a writer.

**Theme 2: Patterns in Spelling**

This case study focused on using writing tasks in order to understand what Sophia understood about spelling, what she was on the verge of conceptualizing, and what she had yet to comprehend and use. From each writing task, analysis of how she spelled was used to develop spelling instruction that focused on strategically supporting Sophia in her own use of language. From my own work with Sophia and other students, I have found that although spelling development often times is gauged by staged levels of development (Ganske, 2000), my analysis found that spelling patterns can fluctuate as the learner tries to make sense of phonemes, spelling patterns, vowels and words in print. As students create these *meaning-form links* which form “connections between the understanding of language and the processing of visual characteristics of text” students are experimenting or transitioning towards stabilizing his/her orthographic knowledge (McGee & Richgels, 2012, p. 384). Instead of identifying a spelling level from prescriptive spelling assessments, by analyzing Sophia’s writing tasks I found spelling patterns that Sophia mastered and others she had yet to grasp. Through a thorough analysis, targeted spelling instruction supported those areas Sophia was on the verge of understanding. Evidence
led to Sophia exploring more spelling patterns within her writing which in turn led to even more spelling instruction on my part. This organic approach led to areas of focus that would otherwise have been ignored if her spelling instruction was limited to prescriptive assessments and not her writing.

When orthographic development and word study instruction focuses on *within word patterns*, students build his/her knowledge of orthography and explore spelling patterns (Bear, Invernizzi, Templeton, Johnston, 2008). The *within word pattern* stage is considered to be a transitional period of development between a beginning stage and intermediate stage. At this point of transition, the child works laboriously and exhibits a greater degree of ability in his/her reading and writing through a synchrony of development. Typically, as students grapple with trying to simultaneously combine understanding of orthographic rules and visual characteristics, students who are working in the *within word pattern* or transitional stage use but confuse vowel patterns (Bear, Invernizzi, Templeton, & Johnston). From the analysis of Sophia’s writing tasks, evidence of her working within this transitional stage of *within word pattern* orthographic stage revealed a greater depth to what she was capable of and what orthographic patterns she was ready to learn and use next. This evidence led to instructional designs that I created to not only specifically pinpoint areas of focus across writing tasks, but also to extend Sophia’s learning to include deeper orthographic knowledge in areas it appeared she was ready for.

**Discerning Spelling Patterns**

Evidence of Sophia using her orthographic knowledge to guide her spelling was evident in all writing tasks. Patterns in her spelling reflected the labor-intensive thinking Sophia accessed cognitively as she wrote. Analysis provided evidence of how Sophia shifted as a transitional writer from using *single letter-sound* to consolidating units into *patterns* or *chunks* (Bear,
Invernizzi, Templeton, Johnston, 2008). In her writing, it appeared that Sophia internalized these spelling regularities or patterns found in onset (initial consonants) and rime (the vowel and what follows) (e.g., tr is the onset and ack is the rime). Evidence of onset and rime within each of the five writing tasks included words such as 1) sp-end and w-ith (05/21/14), 2) m-ath, w-ant, h-ard, and l-eft (05/30/14), 3) l-ong, sh-arp, d-ark, k-ind (06/16/14), 4) sh-ark, gr-own, str-ipes, and sh-aped (06/23/14) and 5) w-arm, b-ig, sl-ip, and h-urt (06/24/14).

Sophia further exhibited her ability to discern spelling patterns within her writing by using consonant makers, consonant blends, or digraphs. This use indicated a progressive behavior in her higher-order working orthographic knowledge. Evidence of using beginning digraph consonant place markers in each of the five writing tasks included 1) dr-, fl-, fr-, pl-, and sp- (05/21/14), 2) pl- and th- (05/30/14), 3) bl-, sh-, th-, wh-, and fr- (06/16/14), 4) sh-, wh-, st-, gr-, th-, br-, and cr- (06/23/14), and 5) wh-, br-, sl-, sp-, and th- (06/24/14). In addition, Sophia also exhibited evidence of using ending digraph consonant place markers in four of the five writing tasks 1) -th, -ch, and -ck (05/21/14), 2) -th, -ng, and -ch (05/30/14), 3) -ng and -th (06/23/14), 4) -th and -sh (06/24/14), and none were found in writing task five. After reviewing each of the five writing task, it was evident that consonant markers and digraphs use was an area of strength for Sophia.

Typically, as a kindergarten student digraph and other consonant marker lessons and instruction are areas of focus for students. Furthermore, instruction with digraphs usually consists of word work activities, worksheets, and silent teachers such as charts, lists, and word walls. These approaches are less holistic, provide a more bottom-up approach that excludes authentic writing opportunities, and teach spelling in a more isolated manner. Since Sophia appeared to have a good sense of consonant markers and digraphs, the spelling instruction
design focused on other areas less internalized.

**Spelling Patterns on the Verge**

In Sophia’s case, she is on the verge of more complex spelling features and exhibited an awareness of *long* and *short vowel patterns*, *affixes*, *syllables* and *double consonant* usage. In each of the five writing tasks, there were incidences where Sophia was on the verge of internalizing these orthographic rules in a more consistent manner; she just needed a little help and focused instruction. Some of these areas of focus became the basis for the spelling instruction Sophia received (e.g., confused with some ou vs. ow sounds and shows understanding of *you* and *out*) (05/21/14). Each writing task built upon evidence of these patterns of spelling Sophia was grappling with.

Typically, *transitional* writers like Sophia have moved beyond *consonant makers* and now confuse various *long* and *short vowel patterns* in his/her writing (Bear, Invernizzi, Templeton, Johnston, 2008). This was also evident in each of Sophia’s writing tasks. In her first writing task (05/21/14) which was used to guide the first of several spelling instructional lessons that followed, evidence of what Sophia was on the verge of understanding about vowels was the first area of focus. In this writing task, a few different areas of focus were identified relative to vowels (*long e*, *ea*, and *ou*).

Sophia was on the verge of fully understanding the *long e* sound which was evident in words spelt conventionally such as *doggy*, *eat*, *read*, and *me* (05/21/14). However, she did not understand the *double ee* in a word like *Frisbee* (actual spelling *frisbie*) (05/21/14). By using the *ie* to make the *ee* sound, Sophia represented the dual knowledge of how both *sounds* and *visual elements* feed into how she spells. Considering this to guide my instruction, lessons focused on how the *letter y* can be represented as *ee*, *ie*, *i*, and *y* (05/28/14). In addition, the *long e* focus
included e-e (these, scene,), open (he, me, we), ea (sea, heal, peach), ee (see, bee, feel, kneel), ie (thief, grief, niece), and oddball words (dead, break, been, friend) (05/28/14).

Additionally, another area of focus I included was vowel + vowel spelling patterns because Sophia exhibited some knowledge of how two vowels placed together make a particular sound (05/30/14). In her first writing task (05/21/14), Sophia’s writing included words such as eat, read, and does yet she also exhibited some confusion with the words like learn and flowers (actual spelling larrn and flouwers) (05/21/14). These unconventional spellings are typical to learners at this stage of spelling development, mainly because of the exceptions that exist. For example, learn is an exceptions to the two vowel rule mentioned above and ow does make the same sound as words with ou. These are important points to consider as to the difficulty in understanding orthographic rules. Even though Sophia was inconsistent in her use of ea, ou, and oe, she moved beyond consonant markers and included vowels despite her inaccuracies, which in turn indicated how her working knowledge of orthographic rules, sounds, and visual texts were amalgamating. In addition, as mentioned previously, relative to her spelling of flowers (flouwers) another area of focus were diphthongs or ambiguous vowels in order to address Sophia’s confusion between ou and ow words (05/21/14). In these lessons, I was able to extend the learning that I thought Sophia was ready for by also including words that used diphthongs oo, oi and oy.

Another significant area of focus that I noticed in the first writing task was compound words (06/02/14). Sophia exhibited inconsistencies when she put words together and when she broke them apart. What I found particularly interesting about this inconsistency was that all the words were spelt conventionally with the exception for the word a lot (actual spelling allot) (05/21/14). These words included together (actual spelling both to gether and together),
sometimes (some times), and outside (out side) (05/21/14). What is most important about this area of focus is that this is typically an instructional focus in word study for intermediate readers and writers during the intermediate and middle grade years (beginning in second and third for most, and fourth for some) unlike Sophia who is currently in late Kindergarten (Bear, Invernizzi, Templeton, Johnston, 2008).

This first writing task (05/21/14) also included other areas of focus such as using syllable juncture, double consonants (tt, ll, pp, ff, gg) which was another area that Sophia seemed to be grappling with understanding. In her writing, Sophia used doggy conventionally, but unconventionally spelt learn (larrn) using a double r and a lot (allot) using a double l (05/21/14). This was also exhibited both conventionally and unconventionally in writing task two (05/30/14), four (06/23/14), and five (06/24/14) in words like fifty (fifty), sixty (sixty), hammer, (hammar), mammals (mamels), turtles (turttels), and summer (summer). Although this was an identified area of focus, I never got to include it in my instructional lessons. It was clear, that Sophia exhibited enough knowledge of where syllables meet, the doubling spelling pattern rule, and was on the verge of conceptualizing these orthographic patterns.

Typically, evidence of a student’s writing within the intermediate stage reflects how the student has shifted his/her writing from only using single-syllable words. Once a developed foundation in the orthographic knowledge of vowel and consonant patterns is formed, polysyllabic words and intermediate word study (e.g., syllables and affixes) are on the precipice of exploration (Bear, Invernizzi, Templeton, Johnston, 2008). In Sophia’s writing, evidence existed to support her writing within the intermediate stage by her use and confusion of ambiguous vowels, syllable juncture, and consonant doubling.
Furthermore, those areas that Sophia used conventionally, such as digraphs (e.g., froot for fruit) (06/16/14), vowel patterns in one-syllable words (e.g., pick) (05/21/14), and spelling known sight words conventionally (e.g., play) (05/21/14), indicated her readiness for intermediate orthographic spelling instruction (Figure 8). These areas of focus would otherwise go unaddressed through the sole use of prescriptive assessments or general Kindergarten spelling instruction.

**Spelling Meaning Yet to Come**

Sophia also exhibited behaviors that were indicators of how her orthographic knowledge was expanding and stretching, perhaps beyond her cognitive understanding, yet appeared in her writing. Within the intermediate stage of spelling development, other areas of focus that students may grapple with include accented second syllables (e.g., disapeer’s for disappears) (06/23/14), unaccented final syllables (e.g., diffirint for different) (06/16/14 & 06/23/14), and meaning units such as prefixes and suffixes (known collectively as affixes) or morphemes (e.g., cow’ses for cows) (06/23/14) (Figure 9). In Sophia’s case, some of these are intermediate spelling patterns that she had yet to come to terms with were found dispersed throughout each of the five writing tasks.
By bringing these three areas of focus (accented second syllables, unaccented final syllables, and morphemes) together, it helped to solidify many of the lessons Sophia received through this case study. In many cases when we consider how Sophia was using but confusing compound words, syllable juncture, and morphemes, it was evident that at times Sophia was strongly relying on what she knew about phonemes (sounds) while she was also influenced by her visual orthographic knowledge and exposure to texts. To support Sophia’s spelling in becoming more sophisticated, future spelling instruction needs to transfer from patterns of phonics (Ehri’s full alphabetic phase that focuses on blends, digraphs, and vowel patterns) to units of meaning (Ehri’s consolidated alphabetic phase that focuses on larger chunks to decode, spell, and store words in memory) (Bear, Invernizzi, Templeton, Johnston, 2008). This transfer from patterns to meaning will be the foundation for the spelling development that will span the writing achievement Sophia engages in from third to eighth grade, but will need to be the subject of consistent instructional focus to build on the foundation of orthographic knowledge that is already being accessed.

Theme 3: Revealing Power of Word-Sort Activities

The foundational basis for the spelling instruction I designed was based on the conceptual development made through interactive – hands-on word study activities (Bear, Invernizzi, Templeton, & Johnston, 2008). These lessons required Sophia to manipulate word features in a way that allowed for her to conceptualize spelling patterns. Through these interactive lessons the intention was for Sophia to be able to recognize the malleability of spelling patterns that supports learners shifting his/her thinking beyond the traditional rote memorization of words often taught in isolation. The lesson design focused on a systemic approach of engaging Sophia in meaningful reading and writing tasks with an intention to see purposeful transfer from instruction to
application. In addition, a key component to my instructional design included the spelling analysis from each writing task in order to focus the word study on words and word patterns that Sophia both used and confused. Each writing task provided the diagnostics necessary for the instruction that followed. After the first writing task (05/21/14) all the instruction included word study activities that allowed Sophia to consider spelling features, patterns, and how these features and patterns may or may not be connected. There were four specific word-sort activities that provided formative assessment data on Sophia’s orthographic knowledge and awareness. These activities included pattern sorts, pattern layer sorts, open and closed sorts (Bear, Invernizzi, Templeton, & Johnston, 2008). Through these activities the data collected through note taking, helped to guide how to move forward in personalizing the activities to support Sophia’s conventional and unconventional spelling. These informal but formative assessments guided my thinking in how to stretch, instruct, and remediate Sophia’s spelling in ways that generally can be overlooked in whole-class setting.

**Pattern, Layer, Open and Closed Word-Sorts**

After completing the first writing task (05/21/14) it was evident that Sophia was aware that orthographic rules extend beyond single syllable sounds (e.g., d-o-g). Evidence indicated that she understood that vowel patterns are combined to create complex sounds (e.g., y-o-u). After I realized this through my initial analysis (05/21/14) word study activities were designed to include words that allowed Sophia to consider both visual cues in word patterns as well as pattern layers found in vowel combinations. Based on the analysis of the first task, instruction included long e in words like *Frisbee* as well as vowels like *ea* and *ou* in words such as *learn*, *flowers*, *you* and *out* (05/21/14). Interestingly, Sophia was able to sort these patterns based on visual cues she heard in the long e sound in *ee* words, but did not recognize *ie* pattern visual
Thinking back, she was able to identify the long e sound, but ignored the visual cues all together. This was an open sort, in which the student must use visual or sound cues to guide his/her thinking (Bear, Invernizzi, Templeton, Johnston, 2008). However, when it was evident, that Sophia did not recognize the visual cues of the differing vowel combinations I assisted her thinking by making four vowel pattern markers (e.g., ea, ee, ie, -e), this changed the activity to a closed sort, meaning that there were set categories to sort within (Bear, Invernizzi, Templeton, Johnston, 2008). After this, she resorted the words conventionally and was able to identify oddball words that contained the vowel combination but did not have the long e sound (e.g., friend, break, suite, and seize) (05/28/14).

After the word sort I asked Sophia, what she noticed about the words, she said, “They all have the eeeeee sound.” (05/21/14). “That’s right, Sophia, most of the words have the eeeeee sound, but why did you leave these oddball words out of a pile?” (05/21/14). “Oh, those have the eeeeee sound.” Sophia, second guessed herself and immediately, started putting the oddball words into one of the previously sorted piles. After she was finished, I picked up the word card friend, and the word card kneel and asked Sophia, “Does kneel have the same eeeeee sound that friend has?” (05/21/14). Sophia looked at the cards for a few seconds and then shook her head no. “That’s right, you were right when you left the word friend out of a pile; it doesn’t go with any of these” (05/21/14). Sophia gave a smile, but seemed unsure of what I was saying. At this point, I thought the word sort was taking longer than expected, so I decided to allow Sophia to write. Although my initial thought was that Sophia may have reached a point of frustration, I was surprised to see when I went back to my analysis that in the writing tasks that followed (5/30/14 & 6/16/14) Sophia spelled the word learn and flower conventionally. These two words were a point of focus in the initial instruction and were oddball words that I included in order to address
her misconceptions in the first writing task (05/21/14).

Although I thought such positive indicators of seeing the transfer from lesson to writing was enough to say my instruction was effecting a positive change in Sophia’s thinking of orthographic rules, I realized that there were gaps in the instruction that needed to be adjusted to adequately support Sophia’s learning. For one, after the length of time needed to complete the initial word sort, I realized that perhaps Sophia may not have completed a word sort previously. With this in mind, I needed to help support her more and would need to be sure to provide more support. However, at the same time, I made the decision to continue to utilize open sorts because I wanted to see what Sophia could do on her own. Looking back to my analysis, I noticed a repeated note of the amount of support necessary to help adequately support Sophia during each word sort activity. Could this be because of the open sorts I continued? Would switching to close sorts have supported Sophia more appropriately? Although I don’t know to answer to this, I thought that my level of support could mean two things. Either my support seemed to allow a high level of teacher-to-student engagement that may not have been present had a close sort been used or I was supporting Sophia within her zone of proximal development (Vygotsky, 1978). Had I allowed for the right level of support without pushing her into a state of frustration, by allowing her the freedom to take risks and stretch her thinking with me right there to fix-up confusion?

Prompting

The word sort activities provided a significant amount of data to consider regarding Sophia’s orthographic knowledge. These activities unexpectedly, allowed for a higher level of engagement with Sophia and myself than I originally anticipated. This engagement proved to be an important aspect of this case study, because during these activities, I could inquire more about why Sophia was thinking the way she was, which was a missing element during each writing
task. I say this because, during the writing tasks, I was cautious of providing prompts that might contaminate Sophia’s thinking and the evidence of how she was transferring the learning to her writing. The analysis seemed to reveal that teacher prompting helped to fix-up confusions and stretch learning. Rather than allow the student to struggle independently in her zone of development, (Vygotsky, 1978) prompting allowed for gradual release (Frey & Fisher, 2011) to support Sophia appropriately.

Interestingly, at the start of each instructional lesson, I decided to do a quick review word sort activity to activate Sophia’s thinking. In one particular word sort activity (05/30/14) Sophia reviewed the long e sound. Even though she was aware of the long e sound, Sophia incorrectly pronounced grief and niece with the long i sound, however this incorrect pronunciation followed the vowel pattern rule when two vowels go walking, the first one does the talking (e.g., pie, tie, die) (05/30/14). The thought I had during my reflection afterwards caused me to wonder what cue Sophia was relying on to decode the words. If these words were placed within sentences would her orthographic knowledge lean towards graphophonc/visual cues, or would syntax and semantics play a key role in her decoding? As we moved to new learning, Sophia again began to sort all words (e.g., ou & ow) into the same pile as previously done in error (05/30/14). Again Sophia ignored the visual pattern cues and only adhered to what she heard in some words and generalized the sounds rather than adhere to the visual vowel patterns (05/30/14). As before I prompted Sophia to notice the patterns and made pattern cards for her to use in a closed sort rather than open sort. What was very interesting, even after my prompt, Sophia again resorted back to ignoring the patterns and putting words in one pile. To avoid Sophia getting frustrated, I prompted her to stop and look closely at the words she already sorted. I asked her, “What do you notice about the letter patterns?” “Do you notice anything the same or
different?” (05/30/14). After this instead of responding to my questions, Sophia began to resort the words into the correct piles, based on the letter patterns. Reflecting back, I realized that I had first-handly experienced the importance of balanced literacy and the impact it can have on our students. Balanced literacy relative to decoding texts calls for word decoding using three cues, semantics, syntactic, and graphophonics. By only exposing Sophia to words in isolation (i.e., without sentences to support meaning and grammar), she only had visual cues to rely on and my prompting to help her. This disabled her ability to decode independently as evident in the unconventional manner in which Sophia sorted the words presented.

After these two episodes I decided to adjust my instruction and rather than only have Sophia practice word sorting by shifting to the Wilson Fundations (2007) magnet board (06/02/14). Initially, I thought that as in the act of writing words, allowing Sophia to construct the words herself might give her the malleability I needed to see her grapple with. In these hands-on manipulative activities, I asked Sophia to go back to practice long e words to initiate the activity in which I thought she would be able to create words with ease. What was most significant about this activity was what Sophia said next. “I can make ou and ow words too” Sophia said. “You can? Go ahead” I replied (06/02/14). Sophia continued to make words from memory by manipulating the magnets (e.g., bow, mouth, town, & out) (06/02/14). In addition, with the magnet board I planned for Sophia to practice building compound words which was an area of focused identified in our first writing task (05/21/14). It seemed I hit the jackpot with the magnet board, because Sophia seemed to brighten up by bopping in her chair and smiling as she moved around words on the magnet board (06/02/14). In the next instructional lesson (06/03/14), Sophia came prepared to work on compound words by bringing magnet pieces her mom gave her. Because of her level of excitement and motivation, we used these magnet words which
allowed Sophia to develop additional words that were not originally planned (words not recorded in notes).

This level of motivation intrigued me to revert back to the word sort cards just to see what would happen. In the next instructional task (06/09/14) I wanted to see if teacher prompting would be necessary to support Sophia’s thinking in comparison to the magnet board. The instructional focus was CVCe words with long vowel sounds. Again as seen in the (05/30/14) lesson, Sophia began putting everything into the same pile. I prompted her to look first for pattern, but she stared at the cards not noticing or responding with any indication that she noticed a pattern. I ended up prompting her by making change over to a closed sort by providing a, e, u, o, u markers. This proved to be a telling point between manipulating letters (e.g., magnet board) versus moving the cards around. I realized that although I was providing Sophia a means to notice letter patterns, Sophia needed to be able to manipulate letter-by-letter as evident in the magnet board activities (06/02/14 & 06/03/14). Furthermore, while I thought teacher prompts would be sufficient enough to help support Sophia’s learning, motivation played a significant role in the word sort activities.

**Theme 4: Word-solving Actions Speak Louder than Words**

I began my work with Sophia in September 2013 as her personal tutor, prior to this case study. As I think back now and as I analyze both her writing tasks and the audio-recordings of our sessions, I realized how much Sophia had grown as an emergent learner between the time I first began working with Sophia in 2013 to this case study in 2014. She no longer solely exhibited behaviors generally associated with those of an experimenter learner (McGee & Richgels, 1996). Research according to McGee and Richgels (1997) normally found that experimenters demonstrated an awareness of print (e.g., books, environment, and drawings)
attended to words as a composition of letters, (i.e., random letters make words), and made connection between phonemes in the spoken word and written alphabet. In Sophia’s case, what I realized is that she was no longer grappling with these experimenter behaviors, nor was it taking great effort on her part to form letters, form words with the conventional use of letters, or to include the proper spacing between words (Figure 10). She also no longer verbalized her spelling aloud phoneme-by-phoneme or looked for clues in the manner of articulation (i.e., placement of the mouth, tongue and teeth when speaking).

**Erasing**

Yet at the same time, other behaviors Sophia reflected were those of a learner who was still in transition from experimenting with words to forming behaviors that are more conventional. One behavior that was particularly noted throughout most of our writing sessions included the amount of erasing Sophia conducted. McGee and Richgels (1996) discussed this behavior as learners have a keen sense of print awareness, so much so, that they are reluctant or refuse to make errors in reading and writing because they understand that words hold meaning. In Sophia’s case, her habitual erasing at times hindered her writing by slowing down her writing and causing her to lose her train of thought. Often times, once Sophia had the word spelt the way she thought was correct she often continued to write changing the story she intended to write.

For example in writing task one (05/21/14), Sophia wrote the word *the* followed by a space then the letter *d*, which she erased and changed the *d* to an *e* for the word *end*. When I thought back to

*Figure 10. Conventions. Sophia was no longer grappling with experimenter behaviors.*
these moments, I wonder if this point where she decided to change the story was due to spelling
difficulties or had she simply truly forgotten what she intended to write. It seemed obvious that
the word *end* would follow *the* because of Sophia’s extensive exposure to traditional storybooks
endings (05/21/14). What I thought happened in this instance, was that Sophia repeated the word
*the* in her head and wrote the phoneme she heard, which was *d* instead of the next word, *end*.

The curious part was that the erasing was not always associated with spelling, but rather
with the formation of her letters (06/16/14) and spacing between words (06/23/14).
Understanding that Sophia was still shifting back and forth in her abilities and her behaviors
reminded me not to expect her to only exhibit behaviors that are consistent with that of a
conventional learner, but rather see her need to fluctuate back and forth as she came to terms
with her developing orthography.

**Squeeze It In or Change It**

Initially when I observed Sophia squeezing in letters instead of erasing and rewriting, I
thought that she was exhibiting behaviors of impatience. I also noted that these instances took
place during writing task three (06/16/14) and writing task four (06/23/14) which were both
writing tasks that were directly linked to instructional influences from read alouds and spelling
instruction. I also initially thought that perhaps Sophia was exhibiting a level of frustration by
squeezing letters in, instead of taking her time and showing pride in her work. On the surface,
my notes indicated that perhaps Sophia was struggling because of the inauthenticity of the
writing task or because she was rushing and lacked some of the same pride her other writings
exhibited. I wondered if these events were pushing her into a *stage of frustration*.

However, what I thereafter wondered, was this a perfect example of how instruction was
influencing Sophia’s orthographic knowledge? The evidence revealed that the spelling
instruction may be linked to the amount of edits made, however, was this behavior of squeezing it in part of her developing a working orthographic knowledge? I considered if rather than exhibiting behaviors that limited her orthographic knowledge within the confines of what she already understood, was Sophia pushing herself to apply new learning? Typically, writing processes include an editing stage, where one corrects misspellings, grammar, and clarify meaning. It seemed the behaviors Sophia exhibited, reflected an understanding that conventional writers tend to understand as a necessary part in the writing process in order to get the message across to readers.

Looking back to the evidence, I needed to verify if my new thinking was supported by a link between the spelling instruction received and the words Sophia was self-correcting by squeezing in letters to correct spelling. Even if words were still spelled unconventionally, was she attempting to apply the learning? In writing task three (06/16/14) Sophia wrote “difrint” and then went back to squeeze in an “e” to spell “diferint” (e.g., different). This was an example of editing her spelling, however, there was not a link between the spelling instruction she received prior and this edit. In writing task four (06/23/14) Sophia wrote “white” and then went back to squeeze in an “i” to spell “white.” This edit was linked to the spelling instruction focused on long i words. In writing task five (06/24/14) Sophia wrote “thy” and then went back to squeeze in an “e” to spell “they” (Figure 11). These examples were too few or sporadic to be conclusive either way. However, it would be a very good indicator to how to gauge Sophia’s ability to apply her learning over time.

On the other hand, were there other instances where Sophia was editing her work in a more traditional way by erasing and rewriting
words in order to apply the new learning she received? And while I analyzed Sophia’s behavior of squeezing letters in, were these instances of editing linked at all to the spelling instruction she received?

**Waning Orthography**

While Sophia exhibited some evidence of instructional transfer influencing her orthographic reasoning from writing task to writing task, other times her orthographic knowledge faded in and out over the course of this study. Before this case study began, I was advised that spelling instruction would possibly not be evident immediately in Sophia’s writing, but rather something that would be become evident over time. Based on the instructional focus that stemmed from writing task one (05/21/14) to the final writing task (06/24/14), evidence indicated not all areas of focus were solidified within Sophia’s working orthography while other areas of focus transferred from task to task. This study aimed to understand how spelling instruction would impact Sophia’s orthographic knowledge, and while the waning of orthography impacted the evidence necessary to link instruction to each writing task, enough evidence showed Sophia’s orthographic knowledge was transferring between tasks. Furthermore, some unconventional words also upheld a form of sustainability which reflected Sophia’s current orthographic knowledge, evidence suggests that once repeated instructional focus is given, Sophia was able to break down misconceptions and repair her orthographic knowledge.

While this case study proved to be insight into Sophia’s orthographic thinking through the analysis of her writing samples across a six-week period, the study also revealed the vital links between student application, and formative assessment, and teacher analysis. Throughout this chapter I discussed how Sophia and I interacted in a variety of writing tasks, spelling activities, and conversations about spelling patterns. The evidence exposed the need for teachers
such as myself to support learners based on observations of student behaviors when constructing language. Through her writing, Sophia showed as an experimenter learner, freedom to manipulate letters and letter patterns was necessary, but not at the cost of complete failure or to solidify her misconceptions. As an experimenter, Sophia was not equipped enough to self-monitor alone, she required teacher prompting as a means for guidance and support in order to further her learning. With the appropriate support, Sophia was able to conceptualize more word patterns which was evident in her ability to begin to monitor her writing.

During this study, the major themes that emerged throughout the analysis of data collected, led to a deeper conceptualization for the role teacher’s play in providing authentic writing opportunities that linked motivation to student behavior. The study also led to deeper conceptualization on my part in how to instruct and analyze spelling patterns within word sort activities in order to adequately stretch, instruct and remediate spelling instruction. And finally, through a focused lens, I was able to analyze Sophia’s word-solving actions or strategies that she exhibited consistently or inconsistently during each writing session. These themes not only revealed a substantial amount of data about the learner, but also the role of the instructor.
Chapter 5: Conclusion and Recommendations

Introduction

Looking back to where this case study emerged from, it is hard to believe the growth that both Sophia and I encountered as a result. Thinking back, this journey was sparked by a simple question, *What would happen if spelling instruction was student focused?* This question was something prompted by a children’s picture book Sophia and I read one day. With the ideas swirling in my head and a heart set to support young Sophia in her writing and spelling, I set out to truly understand spelling development which led to looking for answers to a more developed research question: *How might spelling instruction focused on analysis of an emergent writer’s unconventional spellings in authentic texts impact her orthographic knowledge?* The answers came wrapped up in an eager learner who allowed herself to take risks and stretch her thinking in ways not generally experienced in the general classroom setting. In addition, the answers also came in unexpected observations and revealed as much or more about how a teacher’s instruction and instructional decisions can impact the learner. The following sections provide an in-depth look at how the research collected answered my question, what these findings meant for the student learner, the implications to my instructional practice and finally recommendations for future research.

Conclusion

Through this case study, understanding spelling instruction and how one emergent learner embraced language and the conceptualization of spelling expanded and developed my learning as a teacher of emergent learners. After an in-depth analysis of data collected, three specific answers surfaced as to explain how spelling instruction impacted one emergent learner’s writing and orthographic knowledge. These answers not only supported and motivated the learner, but
the findings revealed evidence that also stretched the learner’s thinking while also causing moments of unintentional frustrations.

**Spelling Instruction Supported and Stretched Orthographic Knowledge within the Zone**

Typical classroom spelling instruction at the emergent level focuses around orthographic concepts one at a time without taking into consideration the varying stages of development for each student (McGee & Richgels, 2012). Because my instruction was based on assessing Sophia’s working knowledge of orthographic patterns and shifting her instruction based on collected evidence, spelling instruction supported and stretched Sophia within her *zone of proximal development* (Vygotsky, 1978). From multiple writing tasks, evidence showed that conceptually Sophia understood and used appropriately orthographic concepts of onset and rime (05/21/14, 05/30/14, 06/16/14, 06/23/14, & 06/24/14) and digraphs (05/21/14, 05/30/14, 06/16/14, 06/23/14, & 06/24/14) (Newlands, 2011). This evidence was in line with what could be expected from an emergent learner at the *novice* stage of development (McGee & Richgels, 2012). This evidence also suggested that these concepts were a strength Sophia already relied on in her writing, and that this orthographic knowledge was already conceptualized. Lessons around these spelling patterns which are a typical focal point for emergent learners was unnecessary for Sophia.

To adequately support Sophia through appropriate spelling instruction, I needed to find areas that she was on the verge of conceptualizing. By using each writing task as a guide for how to design spelling instruction, evidence revealed certain areas such as long and short vowel patterns (05/21/14 and 05/28/14), affixes, syllables and double consonant usage (05/21/14, 05/30/14, 06/23/14, & 06/24/14) as orthographic patterns that were more complex areas that Sophia needed support in conceptualizing (McGee & Richgels, 2012). This evidence suggested
that Sophia transitioned from the early *novice* stage of language development well into a more
developed stage as an *experimenter-conventional* learner (McGee & Richgels, 2012). By focusing
spelling instruction on these areas, writing tasks began to show evidence of these focal areas
being conceptualized by Sophia. She started to grapple with the use of these spelling patterns
and further exhibited behaviors of excessive erasing (05/21/14, 06/16/14, & 06/23/14) and
squeezing letters (06/16/14 and 06/24/14) into words that reflected her stretching her thinking
when it came to spelling. By working within these focal areas, Sophia was shifting back and
forth in her conceptualization of orthography. Because I was there to support this shifting, she
was working at a comfortable pace that allowed for her writing to continue to *feed-forward* the
data necessary to guide the instruction in a manner that adhered to the needs of Sophia (Frey &
Fisher, 2011). These behaviors Sophia exhibited supported the research by McGee and Richgels
(2012), Templeton and Morris (2000), and Bear, Invernizzi, Templeton, and Johnson (2008)
which suggested staged progression of spelling development through varied stages of
development may vary in how each student progresses. With further focus, continued data
collection, and tailored spelling instruction, this methodology had a positive impact on Sophia’s
expanding orthographic knowledge.

**Spelling Instruction Frustrated the Learner to Make Overgeneralizations**

While the writing tasks revealed a positive impact of how Sophia was able to transfer
new spelling instruction towards her expanding orthographic knowledge, other aspects impacted
Sophia differently. Based on what I researched as good spelling instructional practice, lessons
were designed with word-sort activities as a means for Sophia to practice manipulating spelling
patterns (Apel & Masterson, 2001; Donnelly, 2013; Fountas & Pinnell, 1998; McGee &
Richgels, 2012). Through these activities I observed Sophia attempting to use what she knew
about language such as making the connection between visual cues and her working memory to manipulate vowels and letter patterns. This connection refers to what Ehri and Wilce (1982), Glenn and Hurley (1993), and Treiman and Bourassa (2000) refer to as mental graphemic representations (MGR). Learners like Sophia, may rely on their MGRs when insufficient strategies exist among phonemic, morphological, and orthographic strategies (as cited in Apel & Masterson, 2001).

Although Sophia recognized the malleability of phonemes, Sophia still struggled to recognize certain vowel patterns independently. What resulted from Sophia’s efforts was a certain level of repeated frustration and overgeneralizations. In the word-sort activities Sophia exhibited knowledge of vowel sounds, but did not recognize visible vowel patterns (05/28/14 and 05/30/14). What was interesting was that this level of frustration and overgeneralization was only exhibited based on the limitations within the activity.

Typically according to advocates for word study, generalizations promote spelling consistency, however, in Sophia’s case, the overgeneralizations caused frustration (Invernizzi & Hayes, 2004). Sophia found her own way of coping with this frustration by changing the word-sort activity to be more flexible by manipulating letter by letter rather than simply visualizing the vowel patterns and then sorting them (Owocki & Goodman, 2002). What I realized was that although I was pushing Sophia outside of her zone of development (Vygotsky, 1978) this level of stretching allowed her to be resourceful and find a way to cope within the activity. This taught me a lesson in being flexible and allowing the student to advocate for herself and take control of her own learning.

**Spelling Instruction Motivated the Act of Writing**

Motivation lies at the heart of most learning goals from my experience, and it certainly
played a key role in my work with Sophia (Owocki & Goodman, 2002). Sophia is the type of learner who is easily engaged and because of our positive teacher-student relationship we enjoyed our time together and looked forward to our meetings. With keeping the experience positive for Sophia within this case study, I invited Sophia in helping to construct a list of writing topics that interest her (05/19/14). By doing this we were able to maintain a level of interest and motivation throughout the study (Alderman & Green, 2011). However, the true evidence of motivation exhibited by Sophia was observed in a few other instances. For one, Sophia was highly engaged in each writing task because the content was her choice. Although I personally questioned the authenticity of some of the writing tasks being influenced by reading content (06/16/14, 06/17/14, & 06/23/14) which crossed over from tutoring sessions, Sophia’s cheerful disposition indicated that she was writing with interest and motivation to tell her story (Pinnell & Fountas, 2011). There were not moments when Sophia seemed reluctant or hesitant to write. I take this as one piece of evidence that Sophia was motivated because of personal choice on the writing topic (Shapiro, 2004). In addition, I found evidence of high engagement and motivation for Sophia in the personal content she included in several writing tasks (05/21/14, 05/30/14, 5/31/14, & 6/24/14). Since these writing tasks were less structured in format, having little to do with outside reading materials, Sophia again was able to take the driver’s seat in her learning influence her learning in a positive way.

The evidence collected from this case study led me to understand the complexity of spelling instruction, but more importantly, it revealed the direct impact my instruction no matter how thoughtfully planned, can both positively and negatively impact the learner. The case study revealed several levels of implications for both the student and the teacher, and provides a
stepping stone for future studies in emergent orthographic development that is linked to personalized spelling instruction.

**Implications for Student Learning**

It has been almost a year since this case study began with Sophia, and although my work with her through Professional Tutors of America (2012) ended in December 2014, I have witnessed a substantial amount of growth in her orthographic knowledge as an emergent learner. Through this case study, Sophia experienced spelling instruction and writing in a manner that was focused on her instructional needs based on observational feedback and writing samples. Through these experiences three significant areas of focus indicated substantial implications for growth and development in orthographic knowledge for Sophia and possibly other emergent learners. These three areas include hands-on activities, concepts of word patterns, and the freedom to write.

**Student Learning Enhanced Through Hands-on Word-Solving Activities**

Prior to beginning this case study, my experience in the classroom exposed me to the benefits of allowing emergent learners to develop orthographic understanding through hands-on activities (Donnelly, 2013). However, through this case study, I was able to more fully conceptualize why this hands-on method resulted in positive learning outcomes. Through my work with Sophia, I saw how manipulating words allowed her the flexibility to construct her thinking. These observational moments throughout the case study directly formed a link between how Sophia was using what she already conceptualized about orthographic rules as well as allowed me to see those moments when she needed the appropriate support to stretch her thinking (05/28/14, 05/30/14, & 06/16/14).

While these observations confirmed the benefits for hands-on word-solving opportunities,
it is important to remember as I move forward, that these activities should not exclusively be
used as independent word works activities (Williams & Lundstrom, 2007). Because I witnessed
the level of frustration that can be associated with this type of activity, it is important to
remember that teacher prompting plays an important role in adequately supporting the emergent
learners as they try to make sense of the orthographic knowledge they already have as well as
what they are trying to conceptualize more concretely. This cannot be done in isolation for the
purpose of protecting the learner from becoming frustrated as well as for the purpose of allowing
the teacher an opportunity to formally gather data to inform future spelling instruction. With
these two points in mind, the emergent learner will fully benefit more holistically from hands-on
word-solving activities. Furthermore, these layers of information will help to direct the student-
centered implementation of instructional practices (Williams, Phillips-Birdsong, Hufnagel, &
Lundstrom, 2009).

Looking back to the research I conducted prior to the commencement on this case study,
indicated that, yes, allowing student to work through their orthographic understanding through
hands-on letter manipulation leads towards orthographic growth (Donnelly, 2013; Williams,
actions confirmed this research of how allowing students to manipulate letters and patterns is a
direct linked to their working knowledge.

**Student Learning Strengthened As She Developed Concepts of Word Patterns**

As a new teacher, I understand how spelling patterns are used as a guiding tool for
determining the spelling proficiency of orthography (Westwood, 2009). I also found evidence of
how Sophia was able to exhibit her understanding of some patterns more than others through
consistent word manipulation. From the collected, coded, and analyzed writing tasks, I was able
to identify word patterns in a more conclusive manner that allowed for spelling instruction to specifically pinpoint gaps in Sophia’s understanding. This specific focus is an area that Masterson and Apel (2010a) described the ineffectiveness of prescribed lessons that generally do not address gaps, but rather a systematic spelling instruction regardless of what individual students are capable of or not.

Transferring this thinking to the classroom will allow for instructional practices to be designed around the needs of the students rather than systematically moving from one spelling pattern to another. This form of strategic instruction will more adequately meet the orthographic needs of emergent learners in a more precise way that allows for differentiation through a more holistic and student-centered approach. Sophia’s actions show the value of what it means for our students when we focus instruction on the individual needs of our students (McGee & Richgels, 2012; Templeton & Morris, 2000; Bear, Invernizzi, Templeton, & Johnson, 2008).

Student Learning Thrives on the Freedom to Just Write

While I suspected that just allowing Sophia to engage in writing opportunities would result in a positive experience for both Sophia and myself, these writing tasks motivated the emergent learner more than I expected. The most significant moments of motivation were those in which Sophia strictly wrote on the content of her choice (Alderman & Green, 2011; Owocki & Goodman, 2002). These writing opportunities not only allowed Sophia to choose the content, but it allowed Sophia to draw on personal experiences that directly motivated her and engaged her interests. In the most significant writing tasks that I noticed Sophia’s highest level of motivation, my analysis revealed, the increase in word count, story dynamics, and personal connections (05/21/14, 05/31/14, & 06/24/14).

These writing moments also allowed for me as the observer to witness the positive
behaviors exhibited by an emergent learner that seemed fearless in her writing. Sophia did not exhibit moments of hesitation or uncertainty when writing during these tasks. Her behaviors exhibited that of a learner that thrived on the freedom of an opportunity to freely write without being directed or prompted. These collected moments of positive writing behaviors and the form of motivation witnessed reveal the benefits allowing students the opportunity to freely write can yield (Williams & Lundstrom, 2007). By allowing students these writing opportunities, research shows that we allow students the freedom to explore within their zone of development, while taking the data from these writing tasks to understand the conventional orthographic knowledge the student understands and what the student is ready to be formally instructed in a more holistic and student-centered manner (Alderman & Green, 2011; Masterson & Apel, 2010a; Puranik & Apel, 2010).

**Implications for My Teaching**

When I talk to individuals about this case study, many are surprised to hear my enthusiasm and the amount of learning that I attained as a result of these findings. It is easy to understand their surprise when I compare my knowledge of spelling instruction and orthography from the commencement of this study to now. In my initial research on spelling instruction, I took for granted many of the techniques and approaches based on my past learning and experiences. I also underestimated the complexity of learning language. Looking back to where my conceptual understandings of spelling have grown from, not only broaden my view of instructional implications in spelling, but overall as a teacher. There are four specific implications for my instructional practice that I currently stay cognizant of in all manners of good instructional practice. These implications include the power of teacher prompts, authentic learning opportunities, flexible lessons, and working in the zone of proximal development.
(Vygotsky, 1978). Interestingly, as professionals, we understand that hands-on application is one of the most powerful tools for solidifying learning, but how much more powerful is it when as the learner, we too experience this solidification for ourselves?

**Teacher Prompting a Powerful Tool**

I have this theory that having the knack for accurately prompting students comes from having several years of teaching experience. As for me, a new teacher, I might add, I am still grappling with when and how to appropriately prompt my students. What I learned from this case study is the power prompting has to lead your student to success or failure, depending in how and when you as the instructor, intervenes. I have always been hesitant to prompt, worried that I am hand-holding or leading the student to the answer. What I failed to realize, was that the right prompting is just like holding the ladder still as your student stretches into their *zone of development* (Vygotsky, 1978). Without me, my student could fall, but with me there to guide, lead, and support, greater heights are attained. In this study with Sophia, I came to this realization when she needed me to guide her in the word-sort activities (05/30/14, 06/02/14, 06/03/14, & 06/09/14) to avoid failure. It was not giving her the answers as I previously thought, it was helping her to stretch her thinking in a safe but meaningful way. Sure we learn from mistakes, and with prompting, there can still be room for mistakes, but it helps the learner grapple with their own thinking while considering what you are hoping they will stretch to ascertain (Fountas & Pinnell, 2012).

In the extensive work done by Fountas and Pinnell (2012), their research promotes the use of prompting as way of enhancing instruction in writing in order for teachers to build literacy and help students to problem solve. Through observations, teacher’s pay keen attention to spelling behaviors in order to support brief, but powerful and purposeful interactions that help to
extend learning (Owocki & Goodman, 2002). Just like with my work Sophia, the right prompting proved to guide and scaffold learning in support of what they are showing us they are capable of doing independently, and what they just need a little prompting to move forward.

**Authentic Opportunities Leads to Prodigious Learning for All**

Throughout this case study I tried to maintain a level of authenticity because I wanted to provide a setting and writing opportunity different from what is typically found in an emergent classroom (Alderman & Green, 2011). By maintaining authenticity, I hoped to keep Sophia’s interests at the forefront of my lesson planning, case study format, and writing opportunities. While in the middle of my study, I began to question the level of authenticity, I also realized that Sophia’s motivations kept the authenticity intact. As I continue my career in the classroom, I want to allow room for authenticity as often as possible. Allowing my students to take the driver’s seat in their learning, allowing for students to adjust activities to achieve success, allowing for personal interests to be pursued, all lead to this authenticity I seek to achieve.

Combined, these points were presented in this case study as an authentic learning opportunity for me to realize the power of authenticity means that as much as we plan for its opportunities, allowing students and yourself to be led by the opportunities that arise in the classroom are the essence of pure authenticity.

During this case study, one approach I lost sight of was the work by Sipe (2001) who linked motivation and authenticity through *interactive writing* between student and teacher. What is significant about this, is that Sophia and I engaged in this act of *sharing the pen* early in the case study that helped to propel the level of motivation (05/31/14). This was easy to do since the case study was just with one student, but this is something I want to keep in mind for future classroom instruction, especially with reluctant writers. Not only will this encourage writing, but
interactive writing will also help to model writing conventions and spelling conventions (Sipe, 2001).

**Flexible Lessons Supports Flexible Learners**

Good instruction allows room for student-led learning; we know this (Williams, Phillips-Birdsong, Hufnagel, & Lundstrom, 2009). We also know that as much as we plan our lessons, things change and your lesson can go over amazingly or flop. I went into this case study relying on the strength of my lesson planning to achieve success. I went in with the mindset that I had dotted every i, and crossed every t. What I learned is that as much as we plan for our students to learn, every day we walk into the classroom we walk in as learners too. With this mindset, allowing student feedback to *feed-forward* the learning that occurs leads to learning for all (Fisher & Frey, 2011). Even with the best made lesson plans, allowing students to guide the learning and take control leads to success. Sophia taught me, that her motivations and high levels of engagement saved my lessons from completely flopping. What I learned, is that moving beyond the script and allowing for flexibility can provide a greater yield at times.

The focus of this study was grounded in a holistic approach. This meant that not only would the instructional design be individualized, but the case study would collect and analyze data from multiple writing tasks to understand not only what the student was doing conventionally, but also unconventionally. This focus is not typical for what happens in the classroom today when we consider the prescriptive approach. While the research by Apel and Masterson (2001) and Kelman and Apel (2004) attempted a holistic approach by including both perspective assessments in conjunction with writing tasks, these studies were limited in that they both failed to use the writing tasks to guide instruction, but rather only as a comparison of words spelled correctly versus number of words written. This is where work I did with Sophia, went
beyond the typical holistic approach and focused on writing tasks that were more in line with approaches such as Shapiro (2004) that focused on the underlying influence of orthography through the linguistic skill of semantic awareness as well as the orthographic rules found in student samples.

In the Zone Promotes Growth

Throughout all of my educational courses, one name that often came up was Vygotsky. I entered this case study know that I needed to use Vygotsky’s (1978) zone of proximal development as a guiding factor as I worked with Sophia. I thought I had a grasp on understanding that as I tried to stretch Sophia into areas she had yet to conceptualize, I needed to support her to avoid frustration. What I came to realize, was the varying degrees and the power of working within the area of development. As I continue my career, I want to stay cognizant of identifying each student’s zone of development (Vygotsky, 1978) in order to know what adequately stretches their thinking. I also want to remember that students should not always be stretched, but allowed to work within a comfortable zone for enjoyment and sustainability will help to secure the foundation when it is time to stretch.

The overall impact this case study has had on my teaching is enormous. I have learned so much about who I am as a teacher and a learner. I have experienced authentic forms of reflection that allowed for me to push my thinking and analysis of Sophia’s orthographic knowledge (Owocki & Goodman, 2002). What I want to remember as I move forward, is that as the teacher, I enter the classroom equipped with instructional plans, proven theories, instructional insight, I remain a learner among my students who each have something to teach me about each of them. While the work by Vygotsky (1978) was prominently echoed in my actions and thinking throughout this case study, his work influenced other professional resources that I pulled from
such as (Fountas & Pinnell, 1998; McGee & Richgels, 1996; Owocki & Goodman, 2002). This common foundation supported the thread that wove throughout this study to keep my focus student-centered.

**Recommendations for Future Research**

When I set out to explore spelling instruction that was student focused, I did not expect to encounter the amount of depth which this topic encompassed. While this case study resulted in both positive and negative implications for both student and teacher alike, there are four significant focal points that I recommend for future research either for myself or others who are interested in furthering the research that surrounds how learners develop a conceptualization of orthographic knowledge as evident through writing. Two of these focal points focus on instructional practices and two focus on limitations that existed based on case study design.

**Scripted Teacher Prompts**

Initially when I designed this case study, my intention was to uphold student authenticity by limiting my involvement in the interactive word-sort activities and writing tasks. My thinking supporting this approach was first to allow an opportunity to observe and record pure student orthographic knowledge representations through the manipulation of words and the recognition of spelling patterns. Secondly, knowing Sophia was a student who in the past looked to me for guidance and assistance when unsure, I wanted to limit my engagement to prevent inadvertently giving away expectations or conventional spelling clues/cues. Reflecting on this approach, I wondered why I did not consider scripted prompting cues to support student learning. Thinking back, I was familiar with both the Fountas and Pinnell, *Prompting Guide* (2012) used in their *Leveled Literacy Intervention* Kit and the observational spelling assessment prompts designed by Marie Clay in her *An Observation Survey of Early Literacy Achievement* (2013). These
professionals understood that while prompting can be leading and contaminate the purity of the data you are trying to collect on what students understand, these professionals saw the need for thoughtful teacher prompting to support learners.

In Sophia’s case, I realized prompting was necessary only after Sophia exhibited some level of frustration, especially during the open word sort activities. Examples of the level of frustration noticed were during long e and CVCe word sorts (05/30/14 & 06/09/14). Here I realized, if I had been prepared with scripted teacher prompts, I might have been able to support Sophia’s confusion while still keeping the open word sort activity intact. Because I was not prepared with these prompts, my immediate thought was to switch the activity to a closed word sort. By doing this, I revealed the spelling patterns to Sophia, and limited the amount of data I could collect based on what Sophia’s already conceptualized orthographic knowledge was compared to what she was still grappling with.

In future research, I suggested scripted teacher prompts that are designed to help prompt the student to monitor their actions and explain their thinking in order for quality data on orthographic knowledge to be collected and analyzed. A teacher prompt such as, “Can you tell me more about why you placed that card here?” or “Why do you think this pattern looks like this and has this sound?” would better support the learning focus, data collection, and avoid student frustration. By including more of this open-ended responses, allows the child to stop and think about his/her decisions and reveals the orthographic thinking behind the actions taken.

**Length of Case Study**

When planning for this case study, because I worked separately with Sophia through Professional Tutors of America (2012), I had to adhere to the schedule previously discussed with her parents. In addition, my lesson plans were designed to complement other content subjects
already being addressed within the tutoring contract. Based on these limitations, the case study lasted for an eight-week period of observations, data collection, teacher-led instruction and independent writing tasks. With this format, although much formative assessment data were collected and analyzed to guide my instructional practice, a lengthened case study would allow a depth as to how the student continued to grow, manipulate spelling patterns, and develop her orthographic knowledge over a longer period of time. A lengthened study would allow for not only determining whether new orthographic knowledge was attained, but also if it was sustained over a period of time after the initial instruction. This type of sustained learning would be evident from writing tasks that occurred several weeks or months after spelling instruction.

Although in this case study there was evidence of sustained learning through the application of conventional spelling patterns collected in writing tasks that followed unconventional spelling, there was 1) not enough evidence of the sustainability of these learned conventions, nor 2) enough time allotted to see the consistency of conventional spelling as other spelling conventions were introduced. By lengthening this case study both of these points would be addressed in a manner in which claims of how the instruction truly impacted orthographic knowledge could be determined and confirmed.

The suggested length of time for future case studies could vary depending on what grade-level the study begins, and the amount of spelling instruction and writing task opportunities. However, if these were consistently formatted, a case study that lasted at least one full school term would provide a substantial amount of valuable data. It is important that this full school term is conducted at the emergent learner stage of development (does not have to be the traditional grade-level of emergent learners) to be consistent with the format and approach of this case study. Nevertheless, any student exhibiting unconventional spelling patterns, has some level
of orthographic knowledge sustained, will benefit from spelling instruction designed to address developing orthographic knowledge.

**In Class and Out of Class Writing Samples**

Although the intentions of this case study were to provide authentic writing opportunities for Sophia to write freely, I know that her writing was directly influenced by other factors, such as reading lessons conducted during tutoring sessions. Evidence of this was found in writing task three and four where I noticed the read aloud books directly impacted the writing format and contents Sophia chose to write about (06/10/14, 06/17/14 & 06/23/14). Reflecting back, this caused me to question the authenticity of the writing tasks and whether or not Sophia’s writing would differ in out of class writing compared to the writing tasks she completed in my presence? By collecting and analyzing out of class writing samples I think there would be less chances of influencing student writing. These samples could be in the form of letters or homemade greeting cards, drawing or sketches that include written texts, and lists. This would allow for orthographic use to more authentically be collected. The evidence from this case study also pointed to the impact of authentic writing opportunities. Although there were writing tasks that allowed for authentic writing such as writing tasks one and two where Sophia wrote about personal aspects of herself (05/21/14 & 05/30/14). By collecting a variety of both in class and out of class writing samples, a greater understanding of the student’s orthographic conceptualization can be analyzed.

**Capitalizing on Authenticity**

When I set out to uphold a certain level of authenticity for this case study, I was surprised when I came to the realization that I had possibly contaminated that with which I was so purposefully trying to maintain. In my hopes of keeping the writing tasks as open and free from
teacher directives, I found that I had engaged in a practice that led to directly impacting Sophia’s writing. By this, I am again referring back to the points mentioned previously regarding the reading content crossing over into the writing content (06/16/14, 06/17/14, & 06/23/14). While I came to the conclusion that because Sophia maintained high levels of interest and motivation that she was not negatively impacted by this crossover, I suggest that preservation of authenticity remain a high priority and used as a guiding post for future studies.

These few focal points will support future studies to be more focused on student learning and guide the study in a manner that will lead to strong instructional planning, formatting and data collection. In any study that involves instruction children, my biggest take away from this case study and suggestion for others would be to allow for flexibility and allowing the student to have a voice, be heard and yes, drive the instruction at times.

**Final Thoughts**

Through this case study I had the opportunity to see the value of encouraging one emergent learner to practice writing. While each of these writing artifacts provided detailed data into the learner’s orthographic knowledge, these writing tasks also allowed me as the instructor to see the benefits and power of authentic writing opportunities for students. While the analysis exposed orthographic approximations, misconceptions, and confirmed understanding, the analysis also revealed the direct impact teacher instruction has on the emergent learner. This analysis also revealed orthographic behaviors otherwise overlooked when instruction is generalized to instructional practices that focus or utilize prescriptive and teacher-selected spelling assessments isolated from individualized student data. Through these combined learning opportunities for both the emergent learner and myself, this case study provided the foreground for further orthographic learning to come.
References


Appendix A

Observation Protocol

Observation Date and Time:______________________ Length of Observation:____________

Orthographic Evidence During Authentic Writing & Interaction

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<thead>
<tr>
<th>Description of Behaviors (student)</th>
<th>Teacher Interaction (Prompts/Explicit Instruction)</th>
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Reflective Field Notes