

A Study of Grade Three and Five Students' Strategic Use of
Spelling Knowledge

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ABSTRACT

Spelling is often a lightning rod in discussions on literacy. The general public, as well as educators, often judge the state of literacy by the occurrence of accurate, conventional spelling (Templeton & Morris, 1999). The purpose of this study was to reveal how students employ strategies in their spelling and how spelling strategies were being taught in their classrooms. This study also sought to uncover teachers', parents', and students' perspectives and knowledge regarding spelling.

Case studies of six elementary school students were conducted. Each student was interviewed, along with their teachers and one of their parents. Students also filled out a self-reflection form. Students and teachers were observed in their classroom setting.

Findings indicated that students used a variety of strategies. The primary strategy articulated was sounding out; the better spellers also used analogy and visualization. Students knew and often used the strategies encouraged by their teachers and parents. The literature linked the processes of reading, spelling and writing. Most of the participants mentioned the connection between reading and spelling, but failed to recognize the importance of writing for spelling. A third finding was that

the teachers had adopted new methods for teaching spelling but had not altered their role to provide for increased learning.

Implications for practice include suggestions for combined methods for teaching spelling, explicit teaching of strategies for all students, and teacher education that includes "reflection *and* action" (Ritchie & Wilson, 2000, p. 88).

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CHAPTER 1

Introduction

The field of literacy studies, which developed rapidly over the last fifteen years of the twentieth century, moved the exploration of literacy from the classroom to everyday contexts. Currently literacy is understood as socially situated (Barton & Hamilton, 1998), woven into the fabric of everyday activities, not simply as a set of skills acquired at school through drill and practice. Writing a report, story telling, making a list, text messaging, and reading a novel can all be described as literate activities. The concept of situated literacy has not generally permeated the realm of most elementary schools, so that teachers, parents, and society in general operate within a much narrower definition of literacy.

The skills of being literate are valued in our society to the extent that people's worth is often determined by their perceived acquisition or lack of literacy. Traditionally, fully competent, error-free adult reading and writing were the standard by which students' attempts were judged (McGee & Richgels, 1990). Reading, writing, and spelling were seen to be discrete processes. Each was made up of component skills, which would be taught separately. A person would not be considered literate until (s)he had

mastered all the pieces and put them together to become a competent reader, writer and speller.

The advent of constructivist thought (Piaget, 1973; Vygotsky, 1962; Bruner, 1960) brought about a shift in the perception of knowledge. The *old* view of knowledge as skills and content, *truths* to be acquired, was contrasted with the *new* view of knowledge as being constructed by the learner, a set of *working hypotheses* (Airasian & Walsh, 1997). In education, evidence can be seen of a concurrent shift in the perception of how students learn and therefore, how teachers teach. For example, recent programs in math focus on exploration, active participation, and multiple pathways to the answer as opposed to drill and practice and one fixed and correct way to arrive at the answer. In the language arts, areas of reading and writing process have also been explored. Many teachers use the process approach to writing as opposed to worksheets or teacher directed writing assignments. This facilitates better student engagement in and ownership of the writing process (Dyson & Freedman, 2003). In reading, increased emphasis is being placed on comprehension, the meaning that each reader makes as they interact with the text (Flood, Lapp, & Douglas, 2003). This is in keeping with the idea that students create their own knowledge.

In the area of spelling, however, the question remains whether this shift has been, or is being, made. Is spelling still viewed solely as a finished product or as a process? In the *old* view, error-free adult spelling is seen as something that can be learned through rote memorization and practice. The *new* view implies that spelling, the study of words, could lead students to *working hypotheses* about how the English language works. While there exists one standard spelling for each word, the sheer volume of words in English makes memorization unlikely. When viewed as a process, the study of spelling is about learning strategies for approaching new and unknown words, using one's own knowledge of the ways in which words work (Templeton & Morris, 1999).

As spelling is very visible, it often becomes a proxy for literacy, especially for the general public. The general public is influenced by the level of accurate, conventional spelling as an indicator of the state of literacy in and out of schools (Templeton & Morris, 1999). "Spelling is still the most egregious evidence of supposed illiteracy in the eyes of the general public" (Wilde, 1992, p. 56). Educators and parents alike are concerned about spelling acquisition in children. We cannot, however, influence practice without knowledge of what is actually happening in classrooms in regards to

what teachers and students are doing, and what other factors may be influencing students' levels of spelling proficiency. Controversy still exists around the best practices in spelling instruction (Schlagal, 2002). Schlagal (2002) outlines three possible approaches: "the incidental, the developmental word study, and the basal speller approaches (p. 44).

Spelling issues are not, however, only confined to the educational world. In the adult world of work and business, adults are expected to demonstrate spelling proficiency in their daily work and communication. Again, a person's knowledge and sometimes intelligence are judged on ability or difficulty with conventional spelling (Kosnik, 1998).

According to Saskatchewan Learning (2002), developing a positive attitude towards spelling and working towards achieving standard spelling in writing are the goals of spelling instruction. The difficulty lies in how best to achieve these goals. In the past, spelling research tended to focus on the effectiveness of particular study and test methods (Schlagal, 2002). More recently, researchers have investigated how students learn to spell, leading to developmental research (Courtney, 1991; Kosnik, 1998; Schlagal, 2002). A limited amount of research has been done in the area of students' use of spelling strategies (e.g. Dahl, Barto, Bonfies, Carsello, et al., 2003). This

study seeks to illuminate the strategies that students are actually using or failing to use in their spelling. Another aim is to uncover teacher instructional practices and their possible impact on student practice. This knowledge will be useful in improving instructional practice to, in turn, improve student learning. Unlike other research into teacher and student practice, this study was not limited to instruction and practice within the classroom. It also included the perceptions and understandings of parents as well as teachers and students.

Purpose of the Study

The purpose of this study was to reveal how students employ strategies in their spelling and how spelling strategies were being taught in their classrooms. The intent was to uncover the perceptions and knowledge of teachers, parents, and students about spelling, as well as to describe teacher instructional practices regarding spelling.

The purpose was addressed through investigating the following:

- What spelling strategies are students using?
- What understandings do students, parents, and teachers hold regarding spelling?

- What are teachers' instructional practices, both formal and informal, in spelling?

Organization of the Thesis

Chapter 1 provides the purpose of the study and the research questions. Chapter 2 contains a review of the existing literature on spelling research. Chapter 3 describes the research design and methodology used in this study. Chapter 4 presents the findings of the study. Chapter 5 examines the findings in relation to the research literature. It includes a professional conclusion, personal reflections, and recommendations for further research.

CHAPTER 2

A Review of the Literature

"It is a damn poor mind indeed which can't think of at least two ways to spell any word."
- Andrew Jackson

Why is English spelling so difficult? As an alphabetic system, it is sometimes assumed that there should be a one-to-one sound correspondence. This is not the case however, which has led people to view English spelling instead as completely arbitrary. A debate about spelling and subsequent instructional practices flows from these two divergent views. This chapter will provide a review of the existing literature and research into spelling. Language and learning, literacy, spelling in general, the history of the English language, the difference in characteristics between good and poor spellers, and metacognition will be examined.

Language and Learning

Traditional practices in spelling were supported by behaviourist theories. Rote memorization was considered to be the way to learn to spell. With the emergence of cognitive and social constructivist theories, the research focus changed to individual development and cognition.

Developmental processes could be viewed in Piagetian terms as occurring in discrete stages, or as more of a continuum following the work of Vygotsky (1962), Bruner (1960, 1966), and Clay (1979, 1991) (Dixon- Krauss, 1996; Heald-Taylor, 1998; Templeton, 2003).

"Constructivist theory rests on the assumption that knowledge is constructed by learners as they attempt to make sense of their experiences" (Driscoll, 2000, p. 376). The theories of Piaget (1952) focused on cognitive development. He believed that infants possessed innate processes for learning and that they learned through actions. As children explore their environment they encounter circumstances which conflict with their current concepts or ways of thinking, schema. This causes children to rethink and adapt. The resulting change in schema, accommodation, reflects a balance between their prior thought and their new experiences. Knowledge is constantly being "invented and reinvented as the child develops and interacts with the world" (Driscoll, 2000, p. 188).

Piaget (1973) outlined four stages of cognitive development. Models of literacy development which emphasized stages grew out of the Piagetian perspective. Children's reading and writing behaviour reflects their stage of development and the reading and writing knowledge they have constructed.

According to Piaget, preceding stages play a more important role in concept formation than imitation or instruction (Gentry, 2000; McGee & Richgels, 2000).

In the stage of preoperational thought, children focus on the dominant characteristic of an object. Beers (1980) found that children using the letter name strategy, for example writing the word "are" using "R," were only aware of letters by name. They were unable to attribute another characteristic such as sound to the letters. Read (1996) also supported the link between thought development and spelling development. He reported that a switch from spelling using phonemic correspondence to using standard spelling patterns occurs at the same time as the emergence of the stage of concrete operational thought. For Wilde (1992), "Learning to spell takes place primarily not by accumulating information but by elaborating one's schema" (p. 20).

For Vygotsky (1962), social interaction was essential for cognitive development. Adults supply the language that children need to label their experiences. As children begin to acquire language, parents model and extend. When children use one word, parents respond using that word in a phrase or sentence. For example, a child might say "more" and a parent might

respond, " You'd like some more milk?" Language competence stimulates cognitive development (Vygotsky, 1962). Children gradually take ownership of the language and routines supplied by the adult. This begins with using egocentric speech, children talking aloud to themselves. Eventually children are able to internalize this language (McGee & Richgels, 2000; Vacca, Vacca & Gove, 2000).

Children's development in reading ability can be seen to parallel their oral language learning. In many Western traditions, social interactions with parents are usually the context for the child's first encounter with print. Routines may be established. Gradually students begin to take ownership of these routines. As their knowledge of printed words grows, they continue to use external assistance such as finger pointing and mumble reading. Finally, children are able to read silently by internalizing what they have learned (Dixon-Krauss, 1996).

Language acquisition, according to Piaget's theories (1973), was a product of general cognitive development. He viewed language as a reflection of thought rather than affecting thought (Vacca, Vacca & Gove, 2000). In contrast to Vygotsky, Piaget viewed inner speech as representing egocentric thought. Children were considered capable of social speech only

as they moved away from egocentric thought (Dixon-Krauss, 1996). As children become aware of others' differing viewpoints, they are better able to interact with them.

Intellectual development, for Piaget, is required for learning (Dixon-Krauss, 1996). It follows that students will be unable to understand certain concepts until they have achieved *cognitive readiness*. For Vygotsky (1962), instruction comes at the leading edge of development. Students must be exposed to and use concepts before they have control over them. Optimal instruction occurs in the child's zone of proximal development, "the zone in which an individual is able to achieve more with assistance than he or she can manage alone (Vygotsky, 1962, p. 57). Adults, or more sophisticated peers, scaffold for the students, interacting with them to provide the support they need to complete the task. Gradually, students can internalize this talk. Learning is an "ongoing progression from other-regulated to self-regulated performance" (Dixon-Krauss, 1996, p.15).

Current research literature on spelling seems to incorporate both the ideas of Piaget and Vygotsky. Many educators recognize that not only do students move through developmental stages but that at any given age there will be a range of abilities or stages.

Literacy

Read (1971) ushered in the era of emergent literacy with his study of invented spelling, writing the sounds students hear in words. For example, students may represent the word cat by using the initial consonant 'c' or with initial and final consonants 'ct' until they are able to hear and represent all of the sounds in the conventional spelling. This shift in perspective saw literacy viewed as something acquired over time; it was recognized that children began their journey of ever-increasing literacy knowledge and proficiency long before they got to school (Richgels, 2002).

Current scholars describe the relationships between reading, writing, and spelling. While researchers agree that these processes are related, there is disagreement about which has more influence or which informs the other.

Ehri (1997) tied spelling more closely to reading: "Learning to read and learning to spell are one and the same almost" (p. 237). Spelling and reading are seen to be the same in that they access the same kinds of information in memory: information about the alphabetic system and about specific word knowledge. They are dissimilar in how the language user applies this information. In reading, students must identify a word; in spelling students

must write letters in their correct order. Therefore, more information is needed to spell correctly than to read accurately (Ehri, 1997).

Frith (1980) contended that good and poor spellers read differently. Good spellers read using full clues, which provide them with the full orthographic picture of words; they look at all of the letters and the order in which they are placed. Poor spellers, on the other hand, read with partial clues. While this enables them to read more quickly, it results in a lack of detailed orthographic information about letter identities and positions in words (Funnel, 1992).

According to Funnel (1992), spelling and reading require different orthographic descriptions: "linear ordering of letters is a less salient feature for reading than letter identities" (p. 96). Letter identities are important in reading a word but relative position seems to be less so. In reading, approximations are often sufficient. In spelling, however, each letter must be represented accurately for the word to be considered correct (Scott, 1993). Most proficient readers can correctly identify words if all of the correct letters are present and the initial and final letters are in their correct positions. I have often encountered grade one students who

can read the word 'the' and know that it consists of the three letters 't,' 'h,' and 'e' but are unsure of the correct order and so write 'teh' in their stories. Wilde (1992) argued that students could write more words than they could read: "Children's reading vocabulary is bigger than their correct spelling vocabulary but smaller than their writing vocabulary" (p. 28).

Hughes and Searle (1997) concurred that spelling growth is facilitated through reading. They cautioned, however, that reading alone is not sufficient to create good spellers; students must also be involved in the process of generating their own spellings, through writing. The "process of generating words, making choices about which letters to put down on paper, requires writers to pay attention to the internal details of words in ways that readers do not have to" (Hughes & Searle, 2000, p. 203). Writing allows for exploration of student understandings about how words work and "practice in the full orthographic retrieval process demanded by spelling" (Perfetti 1997, p. 30). Hughes and Searle (2000) went so far as to say that without a strong writing program there is no spelling program.

A writing program is possible even for emergent learners. Through the use of invented spelling, children are able to write before they know all the formal conventions of written English. This process also helps to facilitate

and develop phonemic awareness (the ability to hear phonemes, individual speech sounds). According to Richgels (2002), phonemic awareness is “inseparably entwined” (p. 143) with invented spelling. Invented spelling is seen as systematic and not haphazard or random. It progresses through stages, which end in conventional spelling (Gentry, 1991; Kosnik, 1998; Richgels, 2002). Kosnik (1998) provides this example of “the developmental stages for the spelling of the word *letter*”

- | | |
|--|--------------------------|
| 1. one letter to represent a whole word | <i>/</i> |
| 2. initial and final sounds only | <i>lr</i> |
| 3. alphabetical spelling, sounds and levels matched quite systematically | <i>ladr</i> |
| 4. correct use of short vowel, use of <i>er</i> | <i>leter</i> |
| 5. correct spelling | <i>letter</i> ” (p. 36). |

Examination of children's writing reveals what they already know about spelling: “It is chiefly the facts of English, rather than the principle of spelling, that they have yet to learn” (Richgels, 2002, p. 146).

According to Bear, Invernizzi, Templeton, and Johnston (2004), reading is the starting point of spelling. Words that children can read provide the basis for word study. Through word study, students come to

understand the orthography of English; they then apply this knowledge in writing. Templeton (1991) argued that spelling knowledge would contribute significantly to word identification in reading. Gentry (2004) stated, "children learn to read by spelling" (p. 11). It is the knowledge of the alphabetic principle in spelling that facilitates reading.

Perfetti (1997) defined spelling as "the encoding of linguistic forms into written forms" (p. 22). Oral language provides the sounds, and the graphemes or letters are provided by written language. This is the essence of reading and writing. Spelling encodes speech and reading decodes writing (Perfetti, 1997). These three are inextricably linked: "orthography ... is the engine that drives efficient reading as well as efficient writing" (Templeton & Morris, 1999, p. 103).

Spelling

Children's spelling errors reflect neither levels of literacy nor memory. They are indicative of levels of development and understanding of how words and the English language work (Beers & Beers, 1991; Kosnik, 1998). Learning to spell then is not simply through memorization, rather it is a complex cognitive activity whereby increased knowledge of the

orthographic system is incorporated into a child's current understandings (Gentry, 1987; Wilde, 1992).

The sheer volume of words in English makes memorization an unlikely task, and as approximately only fifty percent of English words follow the alphabetic principle, spellers need a range of strategies and knowledge in order to become conventional spellers (Fountas & Pinnel, 1998; Kosnik, 1998). The English language, while complex, also demonstrates regularity. This is seen when spelling is viewed as representing more than one sound. For example the letter 'y,' when used as a vowel, makes the sound of long 'i' in one-syllable words like 'my' and 'by.' The letter 'y' also makes the sound of long 'e' in two-syllable words such as 'baby' and 'sunny'. Pronunciation, a sound's position, the visual patterns, meaning units, and word origin can all affect spelling (Anderson, 1991; Templeton, 2003; Wilde, 1992; Zutell, 1998).

Adams (1990) highlighted the importance of spelling acquisition in developing reading proficiency. As spelling skills are primarily acquired in school (Allal, 1997), this raises the importance of spelling instruction in literacy programs. Educators and parents alike must, however, recognize that this complex system takes time to master. Acquiring conventional

spelling in English can be likened to facility with an adult vocabulary (Beers & Beers, 1991).

History of the English Language

“The evolution of written English explains why our spelling system is the way it is - how it is organized and the key features within this organization” (Invernizzi & Hayes, 2004, p. 217). Old English was very phonetically regular. For the most part, there was a great deal of consistency in letter-sound correspondence. Also, there was no absolutely correct or conventional spelling; scholars spelled words as they thought best (Courtney, 1991). After the Norman Conquest, French became the language at court and French pronunciations and spellings were introduced, especially in legal and governmental vocabulary. Letter combinations began to reflect the language of origin rather than letter-sound correspondence. This was considered Middle English. During this period there was The Great Vowel Shift, long vowels changed in pronunciation. For example, the long 'e' sound was originally pronounced like the modern long 'a' sound, clean pronounced “clain” (Kosnik, 1998, p. 2). The key to understanding these new spellings lay in recognizing their patterns.

During the Renaissance, there was an explosion in knowledge, which required an increase in vocabulary. Greek and Latin words were added to English. Greek and Latin word parts were orthographically regular, based neither on letter-sound correspondence, nor pattern but rather on meaning (Invernizzi & Hayes, 2004; Kosnik, 1998). It was in the later phase of Modern English that English dictionaries were first written. These were meant to standardize spellings in common usage (Kosnik, 1998).

Spelling was viewed as an exercise in memorization. Rules were taught, but there were as many exceptions and words to which the rules applied inconsistently. George Bernard Shaw and Theodore Roosevelt were among those who advocated spelling reform. They argued that given our alphabetic system of writing, spellings should change to reflect a closer letter-sound correspondence, making it easier and more consistent to spell words (Templeton & Morris, 1999). The major difficulty with this would be the loss of meaning signified by the current spellings of English words.

Alphabet, pattern, and meaning represent three broad principles of written English and form the layered record of orthographic history (Bear et al., 2004). The history of the development of the English language is important, as some developmental research suggests that children may

repeat this process as they learn to spell (Invernizzi & Hayes, 2004; Templeton & Morris, 1996). Students increase their level of sophistication in spelling by moving from the use of phonetic knowledge, to the use of pattern, to the use of word meanings. For example, students learn to spell short vowel words such as in 'dog,' then become adept at long vowel patterns as in 'train' and finally are able to grasp meaning based spelling relationships such as in 'sign' and 'signature.'

Instruction

Research

Historically, students were taught spelling through the use of lists. The lists often included unconnected, adult vocabulary. The primary means for acquiring the spellings was rote memorization. Research into spelling began in the early twentieth century and focused on memory and study-test methods. By the 1930s, spelling lists changed to graded high frequency words. In 1954 Horn researched his study method: "look, say, see, write, check". It is still in common use today (Schlagal, 2002).

With research into the test-study-test method, attention was brought to differences among students. In the 1950s, basal spellers were changed to include lists which promoted investigations of patterns. Recent

research has focused on how students learn spelling, leading to developmental research (Courtney, 1991; Kosnik, 1998; Schlagal, 2002). Developmental research investigated how students move through stages or levels from reliance on letter-sound correspondence through recognition and use of patterns to an awareness of meaning based derivational spellings (Bear et al., 2004; Beers & Beers, 1991; Schlagal, 2002).

While there is much consensus around developmental spelling, Treiman and Cassar (1997) argued against a strict hierarchy of development. They found that even students who rely mainly on sound exhibit some basic knowledge about simple letter sequences and morphology.

Best Practice

A great deal of teaching practice has been based not on a theoretical or research base but rather on teachers' perceptions of what works best. Often influenced by the manner in which the teachers themselves were taught, this has been especially true for spelling: "The support for traditional spelling strategies is based more on traditional attitudes and practices than on theory or research" (Heald-Taylor, 1998, p. 404).

Instruction falls into three broad categories: spelling instruction in the context of reading and writing, word sorting, and basal spellers

(Schlagal, 2002; Scott, 2000). Developmental research and the findings that many students did not transfer success on Friday tests into their writing provided arguments against traditional spelling programs and rote memorization. Some, however, took this so far as to "eliminate spelling instruction entirely" (Invernizzi & Hayes, 2004, p. 216). Others asserted that spelling not be taught in isolation but rather be integrated into reading and writing. In this approach, direct instruction in spelling would take place in mini-lessons as the need arises (Invernizzi & Abouzeid, 1994; Scott, 2000; Wilde, 1992). Proponents of this type of spelling program also advocate the value of teaching proofreading skills as part of the writing program: "A focus on proofreading... serves to operationalize the connections between reading, writing, spelling and phonics development" (Turbill, 2000, p. 209). Templeton and Morris (1999) argued against this more incidental way of teaching. They found that most students do not discover the levels of orthography on their own. Thus words must be studied in isolation to facilitate pattern recognition. Also, not all teachers have a strong enough knowledge of the spelling system to teach incidentally.

The second approach advocates word study based on developmental levels. This involves word sorting in which students categorize words based

on shared features. Students are grouped according to ability and words are chosen at their instructional level (Bear et al., 2004; Invernizzi & Hayes, 2004; Zutell, 1998). While this is a direct instruction method and the incidental model is not, both approaches are rooted in Vygotsky's theories regarding the zone of proximal development. Through word study and integrated spelling, scaffolded instruction moves students from what they know to new levels of understanding. For example, students who incorrectly write long 'a' sounds would sort words with 'ai,' 'ay,' and 'a_e' to discern the patterns.

The third approach, like word study, is also a direct teaching model. In this model, spelling is taught through developmentally appropriate basal spellers. Zutell (1998) criticized this method for two reasons. He found that little connection was made between reading, writing and spelling in these programs. Also they tended to be taught in whole group fashion. All students were expected to spell the same words regardless of their instructional level.

Beckham-Hungler and Williams (2003) found lists to be useful for word study, especially when the words included were organized around a pattern or concept. The limitations they found were that students did not

always have prior knowledge for the words given, nor were they necessarily the words needed for independent writing.

Templeton and Morris (1999) added to the requirements for lists that the students must be able to read the words that they were studying in spelling. In reading instruction, students are often grouped according to their instructional level in order to put them in appropriate text. So too in spelling, optimal instruction and growth can be achieved when students study and work with words and patterns at their own level (Invernizzi & Abouzeid, 1994; Schlagal, 2002). Schlagal (2002) suggested that this could be achieved using basal spellers. Lists could be taken from spelling books based on instructional level regardless of grade level. In this way teachers could take advantage of the organized word lists and spelling information provided. The best use of basal spellers was as a resource within a carefully constructed spelling program. This allowed the use of commercial material for "systematic, explicit instruction ... [without having] everyone on the same page at the same time in the same workbook" (Invernizzi & Hayes, 2004 p. 226).

According to Booth (1991), "There is no program, no book, no speller ... that alone will build language competence in a child" (p. 7). An examination of

recommended approaches to teaching spelling revealed that many researchers favoured a combined method. While advocating for a strong reading and writing program, most researchers still reported the importance of a separate word study program. The program suggestions included word sorting along with the word list and test-study-test method. The orthographic knowledge gained by students is then highlighted and practiced through reading and writing, combining the best of both direct and integrated instruction.

Good Spellers vs. Poor Spellers

In examining spelling instruction, researchers have noted characteristics common to good spellers as opposed to poor spellers. Good spellers operated under the assumption that the English system of spelling had regularity and that spelling problems could be solved. Poor spellers were more likely to view spelling as something completely arbitrary and beyond their control (Hughes & Searle, 1997). The best spellers engaged in reading and writing tasks both in and out of school. They viewed correct spelling and proofreading as their responsibility (Hughes & Searle, 1997, 2000). Poor spellers demonstrated limited strategies for word solving which relied heavily on sound (Anderson, 1991; Hughes & Searle, 1997). In contrast,

successful spellers knew and used a variety of strategies when solving spelling problems. They were able to combine knowledge of all levels of orthography: sound, visual, and meaning (Hughes & Searle, 1997; Kosnik, 1998). Proficient spellers also appeared to access an extensive store of words and word specific knowledge from memory (Gentry, 1987; 2004). While it takes poor spellers longer to learn (Scott, 2000), researchers acknowledged, "it takes a long time for [anyone] to become a good speller" (Hughes & Searle, 1997, p. 61).

Metacognition

Alexander and colleagues (Schallert & Martin, 2003) "proposed that knowledge was comprised of two major planes, conceptual knowledge and metacognitive knowledge" (p. 38). Metacognition "refers to knowledge about and regulation of some form of cognitive activity" (Vacca, Vacca & Gove, 2000, p. 21). Students need self-knowledge, knowledge about themselves as learners, and the ability to self-monitor. They also need task knowledge. Not only must students be able to reflect on their processes, they must be able to reflect on language itself to facilitate the move towards standard spelling (McGee & Richgels, 2000; Vacca, Vacca & Gove, 2000).

Templeton (2003) noted the increase in focus among researchers on students' metalinguistic reflection, the ability to think about the knowledge they have about language. Generally students default to sound correspondence when faced with unfamiliar words: "It is striking how infrequently their explicit awareness mirrors their performance capabilities" (Templeton, 2003, p. 743). While students can employ a variety of principles, for example prefixes or suffixes, when asked to describe how they figured out the spelling of a word, most respond that they sounded it out. Sabey (1999) presented evidence from word sorting activities. He found that while younger children could perform the sorts, they often did not understand the spelling concepts. Students can acquire metacognitive spelling strategies through instruction (Dixon-Krauss, 1996; Sabey, 1999). The goal of instruction in spelling is not to simply impart procedural knowledge but linguistic knowledge as well. Students need a repertoire of strategies to be proficient spellers. They also need instruction on self-monitoring so that they can employ those strategies appropriately. It is "more about learners becoming strategic than about them having a well-stocked 'bag of strategies'" (Schallert & Martin, 2003).

Finally

The Saskatchewan English Language Arts curriculum (2002) stated, "The goal of spelling instruction is to help students develop a 'spelling conscience' - a positive attitude toward spelling and a concern for using standard spelling" (p. 271). An awareness of spelling and a positive attitude would seem to fit with the characteristics observed in good spellers. If this then is to be the goal, how do we best achieve it? As indicated in the research, there is little consensus as to the best method for instruction. The reason for this may be that no one type of instruction is appropriate for all students.

Would individual spelling instruction be the key then? This method can be very time consuming and difficult to manage and as such a deterrent to teachers. Also, there are likely students who experience similar needs in spelling instruction that could be grouped together for this purpose. Again, some teachers view grouping for instruction unmanageable. In practice, many teachers continue or return to whole group spelling instruction using graded spelling books, the easiest method of dispensing spelling knowledge but far from the stated goal of spelling instruction.

Some teachers teach orthographic knowledge. Some also teach strategies, but very few facilitate the kind of metacognitive instruction that might allow students to judge what strategies will work best for them and when to use them.

Most researchers now agree on the developmental nature of spelling acquisition. They have proposed and studied various methods by which spelling can be taught. Very few studies, however, have addressed students' strategic use of their orthographic knowledge.

CHAPTER 3

Research Methodology

This chapter describes the research methods that were used in this study. It includes the rationale for the research design, a description of the participants and the setting, the data collection procedures, and the method of data analysis.

This study was a qualitative case study, which sought to uncover, describe, and deepen understanding of grade three and five students' strategic use of spelling knowledge and the impact that teacher and parent perceptions, as well as teacher instructional practices may have. A case study is an "in-depth study of instances of a phenomenon in its natural context and from the perspective of the participants involved" (Gall, Gall, & Borg, 2003, p. 436).

This research was based on six cases taken from two different classrooms. The cases included each individual student as well as their parent and their teacher.

Interviews were conducted with each participant in order to obtain data that were observable and describable, such as perceptions, attitudes, and past experiences (Gall et al., 2003). Interviewing also allowed the

participants to elaborate on answers and deviate from the questions, which may have allowed for the collection of additional pertinent data.

Observations of each participant in their natural setting were also conducted. The observations enhanced the goal of striving to view spelling from the perspectives of the participants and provided additional data for the purposes of enhanced trustworthiness through triangulation.

Participants

The participants in this study were chosen from one urban, elementary, community school. A community school designation is given to a school that meets provincially determined criteria based on demographics. Additional funding is provided for a pre-kindergarten, extra para-professional staff, and a community liaison worker who coordinates programs for the school and community. Gall et al. (2003) stated that the goal of purposeful sampling is to collect information rich data. I chose this setting to facilitate the collection of more information rich data. As I was once a staff member at this school, I knew many of the staff, students and parents. I believed that this prior relationship would allow me to gain entry into the school community due to an already established relationship of trust. I also possessed inside knowledge of the programs, culture, and

community in which the school operated, which may have assisted me as I described and discussed the data.

As a result of consultation with colleagues and field testing it was determined that prior to grade three, many students have not reached a developmental spelling level in which multiple strategies are used. According to Gentry (1982), phonetic spelling is dominant until grades one or two. Students in grades two to four are usually transitional spellers, and students in grades five to eight can typically apply morphemic and syntactic knowledge. Bear et al. (2004) view students' developmental stages similarly. The alphabetic stage can last until grade two. Transitional spellers are usually found up to grade four. Grades three and up may operate in an intermediate or advanced stage of spelling. Participants were chosen from grades three and five, to allow for these maturation differences. Based on consultation with the teachers, I chose one student considered to be of average spelling ability, one of above average ability, and one of below average ability from each class to allow for variation in data due to ability or developmental level.

After permission was received from the University of Saskatchewan's Board of Ethics, permission to conduct this study was sought through the

superintendent and the principal of this urban school division. The students were selected based on consultation and teachers' perceptions of students' around spelling ability and willingness to participate on the part of the parents. I contacted the parents by phone and subsequently approached the students at school. Participation was voluntary and students were given the opportunity to choose pseudonyms for confidentiality.

Data Collection

Methods

Data were collected in several ways. Individual interviews were conducted with each participant using an interview protocol (Appendices F, G, & H). As topics came up, I asked probing questions that were not on the protocol but were related. The interview sessions were recorded and transcribed. Students also filled in a self-reflection (Appendix I). The third method was participant observation.

Interview. The student interview protocol (Appendix F) was based on interviews published by Anderson (1991), Fountas and Pinnell (1998), and Wilde (1992). The interviews were field tested on three children. I chose three students of differing ages and asked all of the questions provided on the published interviews. Questions which elicited little information or were

repetitive were omitted. Subsequently, one interview was created by amalgamating and modifying the questions from the three existing interviews. For example, instead of asking four questions about specific word solving strategies (Anderson, 1991), I asked, "What do you do when you don't know how to spell a word?" (Appendix F). The interview included open-ended questions that allowed me to probe for additional information. These questions pertained to concepts and attitudes about spelling as well as students' self-assessment of spelling strategy use. The interview closed with a performance task dealing with reflecting on spelling in students' own writing.

I developed the parent and teacher interview questions (Appendices G & H) in consultation with colleagues. The open-ended interview model was used to facilitate the gathering of additional information (Gall et al., 2003). The questions were designed to elicit parents' and teachers' concepts and understandings about spelling. Parents were asked to consider spelling in relation to their own children. Teachers reflected on their instructional practices with regards to spelling.

The interview questions were made available to the adult participants prior to the interview to enable more reflective thinking. This was to

promote developing *thick* descriptions from the participant's point of view, or emic perspective (Gall et al., 2003). The interviews were taped. The transcripts were then typed, returned to the interviewees for clarification, additions or deletions, and studied.

Self-reflection. The student self-reflection protocol (Appendix I) was based on a survey published by Anderson (1991) and a reflection published by Sullivan (1994). Students were asked to rate how often they used particular spelling strategies in their writing, their experience and awareness of spelling during reading, and their general attitudes towards spelling. Finally, students were asked to indicate one area they considered important for personal improvement in spelling.

Participant observation. Data were also collected through participant observation. I spent time in the classrooms to observe students' writing and spelling as well as teachers' instruction and interaction with students around spelling. I was looking for evidence of the relationships between spelling and writing instruction, and instruction and student practice. I also sought evidence of students' strategic use of spelling knowledge in both spelling lessons and writing. As observer, I interacted casually with students and teachers (i.e. sometimes sitting in the back of the room, and sometimes

informally chatting) to minimize the effect of my presence in the classroom and enhance observations in the natural setting. Narrative data were collected using detailed, anecdotal notes. Both descriptive notes, including behaviour and setting, and reflective notes were included. These observations provided an etic, outside, perspective to complement the emic perspective obtained from the interviews and self-reflections (Gall et al., 2003).

Chronology

Teacher interviews were conducted first, in a relaxed atmosphere, in teachers' own homes. I preceded the interview questions with questions about the make up of each class (e.g. How many students are in your class? Are there any with educational challenges?). Following this I made classroom observations and conducted parent interviews. My first observation was a writing lesson. I had previously been in both classrooms on numerous occasions, but on this visit I paid particular attention to the environment with regards to literacy support and classroom organization.

The following week, I met with four of the parents. The parents were given the choice of where to conduct the interviews. Two met me at the school, and two invited me into their homes. Each interview lasted between

twenty and thirty minutes. Two of the parents had prepared some notes in response to the questions, to which they referred during our interview.

The teachers administered the student self-reflection to their entire classes. The participants' reflections were copied and we reviewed them within the context of the interview. The following week I observed three spelling periods in grade three, two in grade five/six, and another writing lesson in each classroom. I also completed the last two parent interviews, one in a home and one at school.

The student interviews were conducted at school, during school time. Prior to the interviews, I collected writing samples, spelling assessments, and self-reflections for each student. In all of the interviews, after asking when it was important to spell correctly, I also asked when it would be okay not to spell correctly. That question should have been added to the interview. The question on text messaging was only applicable for one student. For the grade threes this might be because of age. For the older students this may have been a function of socio-economic status.

Question eight, "What are some of the ways that your teacher helps you to spell," was meant to uncover student perceptions around instruction. The answers were mostly about informal kinds of help. Perhaps a better

wording might have been, "What are some of the ways your teacher teaches you how to spell?" I found that the most valuable part of the students' interviews was when the students spelled and proofread in front of me. They could not, however, all articulate their reasoning. I also appreciated going over the self-reflections with the students.

All of the data were collected within the span of one month. I attempted to transcribe the interviews as soon as they were completed. As the student interviews were done in two consecutive days, they took longer to complete. As I transcribed, I kept notes of ideas and questions that arose. Shortly after, I returned to the teachers to ask for some additional information. I wanted to know the reading levels of the students and anything else that they wanted to share about these particular students. I also asked what strategies they taught students, formally or informally, to use when trying to write unknown words. That question should have been added to the teacher interview.

Data Analysis

Raw data from the interviews, self-reflections, and observations were compiled and studied. Data analysis fell under both etic and emic categories. The etic categories (things that were sought) included the particular ways

that the students were dealing with spelling, which strategies they were employing. Evidence of the relationship between teacher instruction and student practice was also sought. The emic categories (things that emerged) included attitudes to spelling, students' level of awareness of their own spelling production and/or errors while writing, and how teacher beliefs related to practices.

After transcribing the interviews and classroom observations, I compiled parent and teacher answers on one master copy and students' answers and observed behaviours on another. This assisted me in discerning patterns in the responses and behaviours. Both as I conducted my observations and later as I reflected on them, I made notes of my interpretations. These were used, along with my summary sheets in identifying themes and patterns. As multiple cases were being studied, it was also possible to detect relational patterns among the data (Gall et al., 2003). These themes and patterns were used to expand on the research focus and questions presented in Chapter 1.

Ethical Considerations

Approval for this study was sought from the University Ethics Review Committee, the cooperating school division, and the principal of the

participating school. Participation was voluntary. Participants were made aware of their right to decline to participate or to withdraw from the study at any time, without penalty. Adult participants were given consent forms and students were given assent forms to sign (Appendices B, C, D, E). Pseudonyms were used to ensure confidentiality. The teachers who participated in this study read and approved the sections written about them.

Researcher's Background

As a literate adult, I usually have an adverse reaction to spelling mistakes in the material that I may be reading. My first reaction, like that of many others, is to discount the material, the message, or the writer, even though I know that conventional spelling is neither an indication of intelligence nor accuracy of information. As a parent, I have encountered instructional practices in spelling that my own children have experienced. I wonder about the value of the weekly tests for which I am forced to study along with my children. I am concerned about my children's writing abilities and the place of editing and spelling within that context. I worry about issues such as lowered self-esteem when subject area tests are brought

home with failing grades due to spelling errors rather than incorrect information.

I have spent most of my teaching career as a primary teacher. Also, much of my experience has been in schools with children of lower socio-economic status. Very early in my career, I began reading professional material to improve my teaching, so that I could support more of my students. As a grade one teacher, my main focus has always been language arts. I am a strong believer in differentiated reading instruction, which aims to teach all students at their own reading levels. If I believe that all students can neither read nor write at the same levels, then it follows that they also cannot be expected to spell the same words.

As an educator, I grapple with how to best instruct my students and to improve their spelling ability while also keeping the importance of spelling in perspective. In the Saskatchewan English Language Arts curriculum (2002), spelling is not delineated as a separate strand of study, but is included as a component of writing. I am also faced with parental concerns around spelling. Parents of the students I have taught often expected to see weekly spelling tests and scores as a tangible demonstration of their children's learning. Many of my colleagues struggle with these same

experiences. Some communities, schools or teachers see a *rigorous* spelling program, often commercial, as an indicator that they are being *accountable* to their students.

In my experience, many teachers use a commercial spelling program for whole group instruction in their classrooms, even when they differentiate their reading instruction. Perhaps they feel that it is easier to teach to the whole group. I have often heard complaints about these programs, students' spelling abilities, and the inability of students to transfer correct spelling into their writing. I think that this approach serves very few, if any. Some teachers individualize spelling programs but use the Monday pretest, Friday test method. While students are probably more successful on the tests, there is often still little transfer.

I believe that besides direct, differentiated instruction in spelling, students benefit when they see correct spelling as their responsibility in their writing. Students gain when given the opportunity to write frequently and the instruction to assist them. I also think that teachers sometimes are not realistic in their expectations about what students can spell correctly. If students are to use their rich oral language to create stories, teachers should expect that some of those words will be outside their spelling ability.

As a researcher, I assumed I would find a spelling program of some sort in each classroom. I hoped to be able to observe how that was connected to the writing program. While I believed students would be able to reflect on their own practices and be able to verbalize their perceptions, I was unsure of whether or not I would see any instruction on metacognition as it relates to spelling. Similarly, I was interested to see what, if any, mention was made of spelling strategies. I hoped participant responses and my observations would lead to an improved understanding of spelling experiences.

Summary

This chapter described the research methodology for this study including the participants, setting, data collection methods, data analysis, and ethics consideration. Qualitative methods were used to investigate student use of spelling strategies as well as student, parent, and teacher perceptions and teacher instructional practices through interviews, self-reflections, and participant observations. The next chapter presents the findings of the study.

CHAPTER 4

Findings

In this chapter, after a brief description of the school, each classroom is described, followed by the lessons observed. The interview sections begin with the teacher's data and then the data of each student and parent pair are presented.

The Setting

School

The school where the study took place was located near the inner city of a small, urban centre of approximately 230 000 people. At the school entrance, visitors were greeted with a welcome sign in many languages, and informal pictures of all staff members along with their names and job titles. Student art, and signs of Christian faith including a mural of Christ the servant, a picture of the Pope, and a cross were also visible. Other hallways displayed student work, community news, and social skills reminders. The school seemed very busy with activity going on in every room and even in the hallway.

Grade Three

The Classroom

On the walls many literacy and organizational supports were presented as well as inspirational messages such as, "Attitudes are contagious. Is yours worth catching?" The *Word Wall* (a bulletin board used as a reference for sight words) contained words learned to date with math words beside it. Both a cursive and manuscript alphabet were displayed. There were also poems, prayers, schedules, a calendar, and reading strategies, like "Does it sound right?" and "Does it make sense?" posted.

Reading resources abounded in the classroom. Stacked on the shelving were anthologies, dictionaries, and picture books. Students had access to four baskets of novels, two displays of trade books, a box of magazines, and boxes of leveled books for take home reading. Each student had their own box, which contained three to five books at their own instructional reading level. Also evident were boxes of multiple copies of leveled material used for guided reading.

Twenty-four desks were arranged in rows, in sets of two. Two computers, one for the teacher and one for student use were visible. There

was a large meeting space in the corner and three tables placed around the classroom.

Lessons

In this classroom, formal writing instruction took place one morning every two weeks. Students had other opportunities to write, including journals, literacy centre time, response to literature, and content area writing. I observed two writing lessons. Both were based on literature and each time the students were given a pattern to follow. The first lesson was to write a winter pattern story based on "The Twelve Days of Christmas" called The Twelve Days of Winter. After the teacher read the original story and an example of the assignment, students brainstormed characters and winter words, which the teacher wrote on chart paper. Students were then set to writing with the expectation that they use their wordbooks for unknown words.

While the students wrote, the teacher circulated to check on and assist students. She checked to see that all students had started with the correct structure, reminded students about capitals and periods, and helped students sound out words. As students began to finish, the teacher sat at her desk to edit. Editing involved erasing errors and having students correct

them on the story, as it was to be both draft and good copy. I observed three teacher behaviours: she would stretch sounds for students to hear; she would write in their wordbooks once they found the initial letter; and she would write the correct word in the margin for students to copy.

The second writing assignment was a retelling of an Aboriginal legend. The teacher had read the story aloud to students the previous day. At the beginning of the lesson, she went through an oral retelling of the story. On the board were a story elements chart and a few key words from the story, including the names of the characters. The students were encouraged to use their wordbooks and the word wall. As students wrote, the teacher assisted them by writing words in wordbooks and helping students sound out unknown words. The teacher then edited students' work. Sometimes she sounded words; sometimes she wrote them; occasionally she sent a student to the word wall to find a word; and sometimes she explained a vowel pattern.

In spelling, the teacher used a resource called Words Their Way (Bear et al., 2004). The focus of the book was using word sorts to discover patterns in the English language. Students were grouped according to developmental level and then performed word sorts on words with patterns that they were *using but confusing*. The first day, the teacher reviewed

vowels and consonants and told each group what they were sorting for. For example students would sort for short 'o' versus long 'o,' or vowel patterns for 'a' such as 'ai,' 'ay.' The teacher and two teacher assistants moved around the room assisting students. The focus was on the sounds heard and the written pattern. The second day students re-sorted, read the words to an adult and wrote them in their books. On the third day, students chose partners from their groups. One student read the word and the other pointed to the correct category without seeing the word. Follow-up work with the week's words was included for those who finished early.

Interviews

The Teacher

Donna (pseudonym) came to teaching later in her life. For the past five years she had taught grade three at this school and before that had only three other years of teaching experience. Her assignment during the year of the study included teaching grade three, and carrying out the roles of teacher librarian and school chaplain. While she had strong opinions about teaching she was open to new ideas and ways to improve instruction. Donna was interested in ongoing professional development to enhance her practice in order to maximize student growth. Evidence of this included her interest

in attending a conference each year, reading professional literature, and attempting new teaching methods or programs.

Donna felt strongly that "reading and spelling are very closely connected." For her, evidence of this came from her own family and her classroom experiences. Among her siblings, the good readers were the good spellers and those who were not considered good spellers did not like to read. Her daughter was also an avid reader and a good speller. In the classroom, Donna found that those students in the top reading groups were also the better spellers.

While Donna felt that it was always important to spell correctly, she tempered that with writing for a purpose in the classroom. All public writing, including stories put on display or pen pal letters, was corrected for spelling. During journal writing, Donna tried to encourage students to write freely and not to worry about correct spelling. On tests, while Donna wanted students to be conscious of their spelling, content took precedence over spelling.

For instruction, Donna used Words Their Way (Bear et al., 2004). She liked the ability grouping advocated by the program, as it fit with her philosophy of trying to work with students at their own level, as she did in

guided reading. Also, she preferred the emphasis on patterns over rules.

During writing, students were expected to use their wordbooks for unknown words.

Students and Parents

In the next section the interviews are presented in pairs. Each pair consists of one student with their parent: Sheena and Meagan; George and Bob; Kayla and Michelle.

Sheena (student). Sheena (pseudonym) both read and spelled above grade level. She was comfortable in school and generally performed well. Sheena came from a single parent home. Her mom, Meagan, valued education. She had found school difficult herself and did not consider herself a good reader, although she had recently returned to school to train to become a teacher assistant.

Sheena saw spelling as something that would be important for her when she was older. She equated good spellers with good students. "They're neat and they can spell lots of words ... cause they're good in school." Providing the word wall, writing in her wordbook, and helping her to sound out words were the ways in which Sheena experienced help with spelling from her teacher. When confronted with an unknown word, Sheena said that

she would sound it out. While she thought she could look around the room, on her self-reflection, Sheena indicated that she never actually did that.

During her writing sample, Sheena used several strategies. When trying to sound out 'pond,' she was unsure if the vowel would be 'o' or 'u.' Sheen chose to write it to see which looked right. The next difficulty she faced was 'Eeyore.' Her strategy for that was to try and piece together words she knew that sounded similar. " I don't know maybe spell it like 'ear' and 'or.'" She relied on visual cues to check her spelling, checking to see if it looked right.

Meagan (parent). Meagan (pseudonym), Sheena's mom, thought correct spelling was important. As a student, she wanted her daughter Sheena to make her best effort and then Meagan showed her the correct spelling if it was incorrect. For Meagan, "reading and spelling - they go together." She pointed out what she saw as the reciprocal nature of reading and spelling: "Spelling helps them to be a better reader" and "If they're interested in reading they're interested in words."

Meagan was unconcerned with Sheena's spelling or her progress in school at that point. Not only did she have no indicators of difficulty at school, but also she saw first hand Sheena's proficiency in reading and

writing. Sheena liked to read to nieces and nephews and to write and play school at home.

Meagan recalled her own childhood. Her parents had been too busy working to spend time reading to them. They "didn't have time for that good stuff." She felt that she and her siblings would have benefited from more exposure. That influenced her goals for Sheena. Meagan had been concerned about reading when Sheena was very young "but books and words were just such a big attraction to [Sheena]."

George (student). George (pseudonym) was an average student; he read at an estimated mid-grade three level and spelled at slightly above that. George was the youngest of three boys. He lived with both parents. George's mother worked outside the home. His dad, Bob, had been forced out of work as his diabetes progressed. George also has diabetes.

George's replies indicated that he saw correct spelling as being important for an audience, on tests, in a letter, and in a story so that "it looks like a good story." George felt he learned to spell by learning the sounds of the alphabet and that he was done learning spelling for the most part. He saw his teacher's help as writing down words to copy on charts or in his wordbook.

When confronted with an unknown word, *George* articulated that he usually tried to sound it out and he also used parts of words he knew. To confirm his spelling, *George* sounded out what he had written. It was wrong "if it d[id]n't sound like anything."

When I observed him writing, *George* relied predominantly on sound. He found proofreading difficult. He passed by 'poaple' and 'rilly' but then wanted to change 'smaller' by eliminating one 'l' even though it was spelled correctly. He did seem to rely somewhat on visual memory as he used many of the correct letters when asked to spell 'again' and 'because' but got them out of order: 'agian', 'beacuase'.

Bob (parent). Bob (pseudonym), *George's* dad, felt it was always important to spell correctly. He recognized that kids might have difficulty doing that and so besides learning new words they should have access to resources for finding correct spelling. "Determination, a desire for knowledge" makes a good speller; for Bob, it was the effort put in and the drive to communicate that were required for proficiency in spelling. He saw that in *George*. *George* liked to write at home and he also liked to read a lot.

Bob felt that spelling was not being emphasized enough in school. He did not see evidence of his children learning the rules that he remembered

learning or how to use a dictionary. Bob would have liked to see more spelling homework. When they did study for spelling tests, Bob's practice was to give the words orally and George would have to spell them orally. Bob saw learning as a partnership. "It's not just the teachers, it's the parents too that have to ... encourage their kids."

Kayla (student). Kayla (pseudonym) both read and spelled approximately one year behind grade level. Her writing samples were brief and although she required glasses, I did not see them. Kayla lived with two parents, her natural mother and a stepfather. She had two younger siblings, one with a speech delay. Her mother, Michelle, was concerned with Kayla's progress in school.

For Kayla, it was important to spell correctly because it was an expectation at school. Kayla seemed to equate learning to spell with copying words. She saw her teacher's help as providing or writing the correct spelling. Her number one strategy for finding unknown words was to look for the word already written, either on the word wall or in her wordbook. After prompting, she said she would sound it out.

I was surprised when Kayla told me she could look around her room to find words: "My mom put words around my room. She took all my toys out,

put all the words. So I have to learn words." I did not ask what they then did with these words. Kayla also used a spelling program on her television. The word was spoken aloud and Kayla was to type the letters. It provided the "middle letter" as a clue, which I took to mean the vowel. Looking at Kayla's work, I noted that vowels were where Kayla was experiencing difficulty.

Kayla did seem to use some visual clues. She found some misspelled words based on the way they looked. When sounding out words, she had difficulty representing the correct vowel and sounded blends by adding a vowel: 'f-a-l-y' for 'fly'.

Michelle (parent). Michelle (pseudonym), Kayla's mom, viewed spelling as important for communication: "If it was not correct, you might get misunderstood." Practice, knowledge of rules, and reading were her ingredients for a good speller. Michelle seemed to equate reading with spelling. When asked about her own learning, she recalled how she learned to read using picture clues. For her daughter, she knew that she was not a good speller because she was not a fluent reader.

Michelle was concerned that Kayla might be dyslexic. Her biological father was dyslexic and Kayla sometimes spelled words backwards for her mother. She felt Kayla was frustrated. Michelle also expressed her own

frustration. She found it difficult to find time to work with Kayla and then the work itself was frustrating as Kayla seemed to always have difficulty. Michelle recalled studying for spelling tests. She thought they were "very hard on [Kayla's] self-esteem to see that she was only getting five out of ten." Michelle felt the reason Kayla did not do well was she did not test well. As a possible solution, they found a computer-spelling program Kayla worked on for one half-hour each day.

In her own childhood, Michelle did not recall being read to by her mother. Parental involvement, she thought, was something new being sought by the schools. Her biggest concern was that Kayla would be passed on without knowing what she needed. When she was younger, Michelle saw that her younger brother, who had Asperger's syndrome, had been passed on through the elementary grades, but had difficulty later because he was not ready for high school. Michelle did not want this for her daughter.

Reflections

Reading and being read to seemed to come up in each interview. Often reading was linked to ideas about being a good speller. Donna was adamant that reading was essential to good spelling. Meagan's parents had not read to her and she felt that, as a consequence, she was a poor reader. Therefore,

she made a conscious choice to read to her daughter who then became a good reader and a good speller.

Bob was a reader himself and mentioned that George was also an avid reader. George was performing at or slightly above grade level. For Kayla and Michelle, reading was not a big part of their lives. Michelle did not remember her mother reading to her and she found it difficult herself to find time to read to or with Kayla. Kayla struggled in both reading and spelling.

During writing time, the students were encouraged to look on the word wall or in their wordbooks if they were unsure of how to spell a word. No other strategies were highlighted except sounding out which was not explicitly stated but rather encouraged through example. These strategies were used and articulated by the students. The only other strategy mentioned or demonstrated by students was the use of analogy (using the spelling of known words to attempt to spell known words). While I did not see or hear Donna use this, she may have at other times. Also, the students may have been exposed to this idea in previous grades during their study of word families.

There was no proofreading required by the students. Upon completion, students took their writing to the teacher and she proofread and edited it.

In our time together, both *George* and *Kayla* experienced difficulty with identifying spelling errors. While all three students failed to identify some words that they had misspelled, *George* and *Kayla* tried to change correctly spelled words.

During editing, I noted how *Donna* interacted with students about spelling. *Donna's* first strategy was to sound words out. She would stretch the sounds and either write the letters or elicit them from the student. She even used this strategy with non-phonetic words: "Beautiful. Let's try and sound it." Both *George* and *Kayla* used this as their primary strategy. *Donna* often explained what she was doing to correct words: "Sledding. It's a tricky word. You need another 'd' in there." This kind of explanation was used many times. The teacher did not explain why one might need two 'ds' in 'sledding' or why an apostrophe occurs in a contraction. As *Donna* was editing every error in the students' writing, perhaps all of the possible information would have been too much for the students. As this was a time-limited snapshot, perhaps I missed her teaching some of these ideas at later times to the whole class or to small groups.

All three students viewed their teacher's help with spelling as providing the correct spelling. That could take many forms: word wall,

wordbooks, charts, and actually writing the word. None of them mentioned word sorting as helping them learn to be better spellers. It was as if spelling was a separate class and it had little or nothing to do with writing.

Grade Five/Six

The Classroom

Many subject areas were represented by the items on the walls. On display were math posters such as information on using place value, science vocabulary and definitions, and student art. There were also inspirational quotations such as "Not everything that can be counted counts, and not everything can be counted" by Einstein, a timetable, and a daily schedule.

Reading resources included materials for reading and for reference. There was a cart full of atlases, a large dictionary on the table at the front of the room, and multiple copies of four different levels of student dictionaries on a side shelf. The teacher had ordered two language arts kits from the board office, which he had for six weeks. These were themed kits, which included anthologies and a variety of novels at different reading levels. The novels were left out for students to select for independent reading. Two other anthologies were on a side shelf. There was one

additional shelf of books for students' use that included novels and trade books.

Twenty-five desks were arranged in rows. There were two teacher desks and a work carrel. Each teacher's desk had a computer and there was one on the carrel for student access. There was one printer and two laptops. This classroom was equipped with a smart board and data projector. The smart board is an interactive white board. It is hooked up to a laptop and can display anything accessible to the computer. Unlike traditional data projectors, the screen responds to touch as well as the computer.

Lessons

In this classroom, writers' workshop was scheduled one afternoon a week. I observed two writing lessons both dealing with conventions. The first lesson was on writing dialogue and the correct use of quotation marks. After showing a clip from a movie, students looked at a written text of the same dialogue. Then the teacher put up two rules for using quotation marks, which were discussed and copied. As a class, the students worked through four examples on the board that were also copied. They were directed to use either their notes, or examples from a novel when unsure of how to correctly use quotation marks.

The assignment given to students was to write a dialogue from one of two given scenarios. While the students were writing, the teacher circulated to give assistance. The work was handed in to be corrected and marked by the teacher.

The second writing lesson was on contractions. The teacher remarked that he had noticed many students having the same difficulty with contractions. A sample of student writing was displayed and the teacher pointed out contractions that had been written incorrectly. He then explained how contractions worked and gave several examples. The students were required to complete a worksheet on contractions.

In spelling, the teacher used the Words Their Way (Bear et al., 2004) resource. The students were divided into three groups. While the teacher got groups started, the other students read quietly at their desks. For each group, he introduced what the sort was about. Two of them dealt with base (root) words and endings.

On the second day, each group had an opportunity to work through the sort together on the smart board. Students took turns placing words in the appropriate columns and they discussed the patterns. One group looked at some of their words and used them to sort further. Students were to check

their own books against the board and were directed to take them home to re-sort for homework.

Interviews

The Teacher

Aaron (pseudonym) had been teaching for thirteen years, five years in grade eight and eight years in grade six. His assignment was grade five and six, physical education, and visual art. Aaron had a technological bent. The Smart Board was relatively new, but he had already found many ways to incorporate it into lessons in order to make them more appealing and interactive for the students. For example, he used a video clip to illustrate dialogue and during spelling students were able to drag the words from their word sorts to the appropriate columns on the board.

Aaron revealed that his views on spelling had changed: "It's changing over time; If you'd asked me this about a year ago ..." He had previously viewed spelling as rote memory, that some people were good at it and others were not. Aaron recalled being one of those kids who worked hard to learn words for the test and then felt frustrated when he did not do as well as some of the other kids. In the past, Aaron had taught spelling using whatever program he found in the classroom. Having all the students work on

the same words, however, concerned him. He found that while it was relatively easy for some, for others it was daunting and difficult.

Not long ago, Aaron tried the Words their Way (Bear et al., 2004) program. He saw this as “a purposeful kind of program.” It allowed for grouping of students and different words for study, which alleviated Aaron’s concern over the same words for everyone. He also felt the assessments provided in the program pinpointed exactly where students were in their spelling development, not only for himself but also for communicating with parents. In exploring this new program, Aaron discovered that he was “discussing how words are put together with the students.” He thought exploring word patterns helped him to realize “all the little rules.” Aaron saw that while the good spellers seemed to understand the rules, poor spellers were missing the background. In working with the students, they were “putting these rules into words” so that when it came to writing, they could talk about the rules they had learned.

Aaron saw correct spelling as important for himself in notes to parents and handouts for the students. He encouraged students to try their best in spelling with final drafts that would be handed in. He also thought spelling was especially important for older students in regards to business

applications. In students' writing, Aaron was more concerned with making the meaning clear than correct spelling. He told his students to try and identify misspellings and then they could fix them together later.

While he felt good spellers knew more rules, Aaron also saw determination as a factor in being a good speller. He found many students with poor spelling did not make any effort to change their spelling mistakes or to try and find out the correct spelling.

Aaron was not completely satisfied with his spelling program. He would like to continue to explore different ways to deliver it but he was captivated by what he saw as a "totally different mind set," learning patterns in words. He told his students, "We're not really learning the words, we're learning the rules."

Students and Parents

In the next section, the interviews are presented in pairs. Each pair consists of one student with their parent: Constantine and James; Joe and Wendy; Lynn and Shannon.

Constantine (student). Constantine (pseudonym) both read and spelled above grade level. He liked to read challenging books and had so many story ideas that he did not have time to write them all down. Constantine lived at

home with both parents and a younger sister. Reading, thinking, and being creative were all emphasized in their home.

Constantine thought that if you did not know how to spell, "you're going to kind of have a tough time in life." It was important to Constantine to spell correctly in school, especially on tests and reports. It would be all right not to have the correct spelling on a spelling placement test or the rough draft of an assignment.

Learning to spell, Constantine thought, came from being taught or a computer program. "My dad keeps telling me ... I learned how to spell with a computer program." Constantine believed he had also learned from reading books. Constantine viewed his grandmother as a good speller because she always double-checked her work for accuracy.

When faced with an unknown word, Constantine said he would usually either sound it out or use similar words. Occasionally he referenced an online dictionary at home. In his writing samples, Constantine demonstrated how he linked reading and writing and used his visual memory. He corrected his spelling of 'presious' (precious) because he had recently seen it in a book he had been reading. When he tried to write 'parliament' he wrote two possibilities off to the side and then wrote the one he thought, "looked a

little more right." Constantine indicated that he usually re-read his work looking for misspelled or misplaced words.

James (parent). James (pseudonym), Constantine's father, indicated that spelling was important in the business and academic worlds. He linked correct spelling to demonstration of intelligence. Paradoxically, he thought that we should simplify spelling such as 'l-a-f' for 'laugh,' to make language more efficient. For James, good spellers had an understanding of language structure but the key was a good memory.

James recalled spelling bees and memorizing words from his childhood. He was also read to a lot. James valued early exposure to language and tried to provide that for his own children. He and his partner always tried to stimulate intellectual growth in their children. They read and told stories; they took vacations and played games; they exposed the children to computers and educational software very early and they " always ... [spoke] to them with the adult vocabulary ... to stimulate them, help develop their language."

James did not consider Constantine to necessarily be a good speller. He thought he was a very good writer but saw spelling mistakes. Constantine's teachers, however, had indicated that he was above grade level

in spelling. James did not like the phonetic spelling he saw being encouraged in the younger grades. He thought "they should be teaching to get it right, right from the start if they're going to consider it important later."

Joe (student). Joe (pseudonym) read and spelled at grade level. He lived with his mother and grandparents. Joe seemed to make connections in his schoolwork. He was the only student to include word study in our conversation about spelling.

Joe thought spelling was important in stories or letters and when copying notes to study from. He used some abbreviated types of spelling on the computer but was used to typing most words out. He would inquire if he did not know the abbreviation.

Writing was one of the ways Joe thought he had learned to spell. In this grade, his teacher helped him through word study and by helping him correct mistakes in rough copies of stories. His teacher either sent him to a dictionary or provided the correct spelling. When faced with an unknown word, Joe thought he would "think about it and sound it out," look in a dictionary, or ask. He found spelling mistakes by looking at the words and sounding out what he had written.

In his writing samples, Joe had difficulty with vowel combinations. He was not always sure which vowels should go together and in which words. In the interview, he indicated he had difficulty with vowel patterns that did not sound the way they looked. Joe relied on visual memory for 'Wednesday.' Joe recalled the first three letters from the calendar. With 'beginning' he tried different spellings to see which looked better. Joe tried to use analogy to spell 'ache' as he had never written the word. He recalled the 'ake' pattern but also thought it might be 'a-c-e' as in 'acreage.'

Wendy (parent). Wendy (pseudonym), Joe's mom, thought spelling was always important. Her initial reaction to text messaging was irritation but then she likened it to the shorthand she had used in nursing. She thought it might be all right in context. Correct spelling, however, must be used in order to be respectful of the reader. A good speller for Wendy was someone who had the desire to spell correctly, to find out the correct spelling.

Wendy recalled being taught rules and having spelling "drilled" into her. She was taken "aback when the kids were not encouraged initially to spell correctly ... but it hasn't been a problem." Wendy encouraged Joe to

write at home by writing letters to relatives and notes to each other. When he had words to study, they would practice spelling them orally.

When she looked back, Wendy was curious about when the shift occurred in school from encouraging spelling the way it sounded to standard spelling. She had perceived a shift in expectations in grade three and that confused her. Wendy felt that the whole attitude towards spelling was "more laissez faire [now]." She remembered it being "strict" when she was a kid. She saw that Joe was not experiencing any difficulty; she thought it was positive that the kids seemed to enjoy spelling.

Lynn (student). Lynn (pseudonym) spelled well below grade level. She experienced difficulty at school academically and socially. There were no drafts in her writer's workshop; when asked, she said she had thrown them out. Lynn lived at home with her mom, her step-dad, and younger sister. Her step-dad was an immigrant who spoke English as a second language.

Lynn thought correct spelling was important for tests and for the future, high school and college. Good spellers, for Lynn, were the same as good students. They completed their work and listened to the teacher.

Lynn's strategies for spelling words were to sound them out or get help. She told me about her mom trying to get her to spell by analogy. She identified misspelled words by sounding out what she had written.

In her writing sample, Lynn was able to identify misspelled words but was unable to correct them. When trying to spell challenging words, Lynn indicated that she got 'because' as it had been on the word wall the previous year, and 'friend' because she had practiced that one at home. Lynn thought the beginning of 'beautiful' looked like 'beast' and that helped her to try and spell it. Lynn had very negative feelings about her ability at school: "When I hear the word spelling I go, Oh great I don't want to read anything or spell anything."

Shannon (parent). Shannon (pseudonym), Lynn's mom, thought spelling was important at school, for job applications, and in letters. A good speller, Shannon thought, used a dictionary and correct pronunciation. Shannon recalled "Word Walls," flashcards, and studying for spelling tests from her childhood.

At home, Shannon used a dictionary when helping her girls to spell words. Shannon saw a difference in her two children. The younger one, in grade one, was reading and beginning to spell words on her own. Lynn was

having difficulty: "Most words are actually very hard for her." When Lynn wrote, Shannon corrected the words: "The majority of her story has to be re-written." Besides looking in the dictionary, Shannon directed Lynn to sound out and showed her how to use analogy to spell new words.

Shannon thought Lynn wrote a lot at home. Lynn showed me a story she was working on; it was wordless. In previous years, when they studied for spelling tests, Shannon would have Lynn write out her mistakes three or five times. Shannon thought that through that, she saw some improvement. In this grade, Lynn often hid her homework. Shannon would have liked to have a schedule from school, so she knew what Lynn needed help with and when.

Reflections

In grade five, language arts was no longer the primary focus. There were fewer literacy supports, both on the walls and in the amount of resources available for reading and reading instruction in the classroom. Being a reader did not come up as a theme and only the above grade speller and his parent mentioned it. Drive, desire, or determination surfaced as a theme. For James, Constantine's dad, you and your ideas could only be taken seriously if they were presented correctly. Both Aaron and Wendy, Joe's

mom, thought you would be a good speller if you chose to look for the correct spelling and took the time to fix your mistakes. Constantine and Joe thought it was important to re-read their work to look for errors while Lynn had lost her desire to even attempt spelling unknown words most of the time because she found it too difficult.

The divide between ability levels seemed much greater at this grade level. Now instead of being one grade above or behind, the students in grade five spanned five grades in spelling achievement. The tendency towards avoidance for the one who was struggling was also magnified. While Kayla sometimes tried to get out of reading with her mother at home, Lynn tried to avoid work at home by not talking about it and at school by not doing it.

Both teachers used the Words Their Way (Bear et al., 2004) program for many of the same reasons. They had been uncomfortable with the weekly test where all the students used the same words. When working with each of his spelling groups, Aaron pointed out the spelling pattern to the students but never explained why. For example, when looking at adding 'ing' to 'float' and 'spell' he showed that 'spell' had a double consonant and 'float' did not. He also pointed out that while 'cut' had one 't,' when 'ing' was added it needed two 'ts.' Rather than explaining why, Aaron said, "It's one of the weird things

in our language." I wondered if the teacher's guide described the reasoning. The guide explained, " We want students to see ... that in most cases the *ing* is simply added to the words and it is only when a word fits the VC or VCe pattern that change to the base word is needed" (Johnston, Invernizzi, Bear, & Templeton, 2005, p. 10). This did not, however, explicitly state that short vowel patterns, VC, require doubling, while long vowel patterns do not. Perhaps this is considered basic knowledge and the assumption is made that the teacher knows. The reasons for 'fix' and 'snow' are explained but not short and long vowels. The previous lesson in the teacher's manual does describe short and long vowels in relation to doubling consonants.

Summary

In this chapter, findings from the classroom observations and interviews were presented. The adults, parents and teachers, held a variety of views about spelling. Many saw a correlation between reading and spelling. Some indicated that memorizing words and rules was important, while others thought that determination and desire played a larger role in spelling proficiency. The students viewed spelling as important for school and for later in life. Most of them equated good spellers with good students. The grade three students thought they had learned to spell from their teachers

while the grade fives mentioned books, writing, and others as being influential. Five out of six of the students perceived providing the correct spelling as how teachers helped them.

Both teachers used word sorting for formal spelling instruction; rules and patterns were discussed with students. Writing was scheduled once a week in each classroom. In grade three, students were encouraged to sound out, use the word wall, or ask the teacher, who would write the correct spelling in a wordbook. In grade five/six, students sometimes asked for spelling assistance. During my observation, the teacher collected the work to be corrected at a later time.

Students used several different strategies for spelling unknown words. All of the students indicated they would sound out words. Many of them used visual clues; they knew words were wrong because they did not look right. Analogy was the other strategy that several of them chose.

In Chapter 5 themes and patterns that emerged from the data are presented.

CHAPTER 5

Connections and Disconnections

In this chapter the findings are presented in relation to the literature and the research questions: What spelling strategies are students using? What understandings do students, parents, and teachers hold regarding spelling? What are teachers' instructional practices, both formal and informal, in spelling? Instances where they match (connections) and do not match (disconnections) are explored. Also included are professional conclusions and questions, suggestions for further research, and reflections on personal experience.

Reading, Writing, and Spelling

The research literature very clearly linked the processes of reading and writing with spelling. The connection between reading and spelling came through very clearly. Several of the participants articulated their belief in a strong correlation between reading and spelling. Donna strongly believed this and considered her take home reading program the best way for parents to assist their children with spelling. As parents, Meagan and James spoke about how reading had impacted their own spelling growth. Meagan felt the lack of reading she had done as a child hampered her abilities in spelling,

where as reading a lot, was how James thought he had learned to spell. From the student's perspective, Constantine also attributed learning to spell to reading and he said he recalled the spellings of words from what he read. The research on good spellers indicated that they spent time reading and writing out of school (e.g. Hughes & Searle, 2000). The results of this study bore this out. The better spellers reported reading and being read to; their parents stressed the importance of reading. The poorer spellers were also poorer readers; in both cases they avoided reading where possible.

Reading was certainly a larger focus for the language arts block than writing in both classrooms. Students read independently most days. Language arts instruction was scheduled every day while formally scheduled writing took place once a week or less. Hughes and Searle (1997) said that reading alone was not sufficient to create good spellers. Students must take part in writing, generating spellings for themselves.

I observed a disconnect between spelling and the writing programs in these two classrooms. During spelling instruction in both classrooms, students sorted words and discussed the patterns they encountered. Aaron spoke about being able to recall word study discussions when assisting students with writing. However, his schedule did not allow for much time to

do this. Joe recalled editing with his teacher. As there were 24 students and writing appeared on the timetable once a week, it would have been difficult for the teacher to attend to everyone's needs. In Donna's class, students were encouraged to use the word wall during writing and they did. The same problem arose, however; the teacher did not have adequate time to work with the students individually to assist them in making connections between word study and their writing. According to the literature, students benefit from writing words for themselves. It is in attempting to spell that students recall the full orthographic picture of words (Frith, 1980); reading does not require the same attention to the internal details of words that writing them does. Writing also affords the teacher the opportunity to scaffold spelling learning for students. It is very challenging to find additional teacher time in the instructional day to conference with students and help them to see the connections individually. I find it frustrating to try and cover all the curriculum requirements and ensure that all students' learning needs are being met. When I focus on one area such as writing, another gets decreased attention.

Turbill (2000) stated, " A focus on proofreading ... serves to operationalize the connections between reading, writing, spelling, and phonics

development" (p. 209). Constantine and Joe indicated they re-read their work. The rest of the students did not mention proofreading, nor did the teachers. I did not observe students proof-reading nor saw either of the teachers instruct the students to do so. In grade three, the students edited two pieces of writing, yet it appeared that proofreading before going to the teacher for editing was not an expectation. With an increase in time spent on writing there would be time to teach proofreading skills. Perhaps one way to make connections with the spelling might be to use a student-writing sample and highlight words from the patterns being studied. As this particular spelling program involved different groups it might be necessary to do this with each different group. In this school division there has been a focus on reading, which might explain the prominence it held within the language arts time for these two teachers. According to the research, good spellers viewed proofreading as their responsibility (e.g. Hughes & Searle, 1997). A shift in the attention to writing would assist teachers in focusing on this important link between spelling and writing.

Teacher Practice

Teacher practice, especially in spelling, has largely been based on the perceptions of teachers rather than on research (Heald-Taylor, 1998). Both

of these teachers indicated that, while they had consulted curriculum guides about other subject areas, neither had looked up what the language arts curriculums had to say about spelling. Donna and Aaron both came to their current program through word of mouth, and testimonials from other teachers. Neither teacher had been particularly happy with the typical weekly list and Friday test. Both liked the definitiveness of an assessment to determine a student's developmental level in spelling and to provide the next steps. While both teachers felt this program was an improvement over what they had previously tried, I observed a lack of connection between word study and spelling in context for the students. One goal of word study is to increase students' ability to be "word solvers" within the contexts of reading and writing (Gentry, 2004; Wilde, 1992). As indicated, however, the students in the study were not given much opportunity for application of word knowledge. Word study is a process through which students come to a deeper understanding of how the English language works (Bear et al., 2004; Invernizzi & Hayes, 2004). In the classrooms visited in this study, it appeared that the word study sorts and weekly lessons were being viewed as a product. Word study was being taught as a discrete subject occasionally referred to in the course of writing. The sorting of words and the weekly

test were an end unto themselves instead of a means to improving the understanding of how words work and writing.

Is this, then, any different than the typical practice of a weekly list and test? Students were grouped according to their developmental level and studied patterns at the edge of their ability, following the idea of working in the students' zone of proximal development (Vygotsky, 1962). Teachers scaffolded student learning in the discovery of these patterns and of how the English language works. Without the opportunity to apply their knowledge, however, students may not transfer this knowledge any better than they did in the typical weekly test. Only one of the students in this study saw the connection between word study and their teacher helping them to become a better speller.

Templeton and Morris (1999) believed that not all teachers have a strong enough knowledge of the spelling system to teach incidentally. It is possible this lack of knowledge might be an issue for some teachers regardless of how they choose to teach spelling. Aaron's background as a middle years teacher may have contributed to some inaccuracies I observed in one lesson. In this particular lesson, one group was studying adding 'ing' to base words. The teacher's manual (Johnston et al., 2005) explained some of

the cases, for example you do not double an x because that pattern is not used in English. It did not, however, go into detail about the need for doubling a final consonant when the vowel is short, as in 'stopping.' When explaining this to his group, Aaron indicated it was just one of those things in the English language. Rather than that being an exception, there was a pattern that usually applied. As Aaron seemed unaware of the reasoning, he was unable to pass that along to his students. More teachers who work with younger children have had the opportunity to attend to aspects at this developmental level.

There seemed to be another disconnect here for these teachers. The teachers seemed to have adopted some constructivist methods but were approaching them from a typical framework. Typically "the teacher's job ... is to dispense skills and then judge whether the student has acquired them" (Ritchie & Wilson, 2000, p. 41). That type of instruction focuses on the product of learning. Words Their Way (Bear et al., 2004) and "Writers' Workshop" (Calkins, 1994) are both based on the theoretical concept that knowledge is individually constructed, focusing on the process. It appeared that the focus in these classrooms during spelling was on the product, the sort itself. I did not observe the teachers guiding the learning for each

student; teacher-student conversations, when present, centred around the activity and not the learning. The underpinning of constructivist methods is that "learning is an active process of construction by the learner. We learn to speak, read and write in meaningful interactions through which we construct knowledge of reading, writing and speaking" (Ritchie & Wilson, 2000, p. 34). Rogoff (1990) called this "guided participation - building bridges between what children know and new information to be learned, structuring and supporting children's efforts" (p. viii). The students were introduced to the sorts and assisted in completing them. The 'meaningful interactions' about what new knowledge the students were constructing was not evident.

The teachers in this study had been unhappy with their past practices and sought out a new approach to spelling. The result was that they put a new program in place, but did not necessarily get to the new learning. When working with students, the teachers often omitted the explanation for why particular words were spelled in particular ways. The underpinnings of these programs represent a fundamental shift from typical spelling programs. In the interests of improving spelling instruction, the teachers rearranged the typical class structure. Students worked in small groups at their own levels.

What did not appear to change was the nature of the teacher's role. In practice, both the teacher's role and student's role is different when using constructivist methods. Teachers and students work together to construct new learning for the students.

What shapes teacher decision-making? According to Ritchie and Wilson (2000), pre-service teachers undergo two apprenticeships. University experiences form the *deliberate apprenticeship*. The *accidental apprenticeship*, which includes previous school experiences and experiences after university, however, seems to be much more significant in terms of teacher understandings. The accidental apprenticeship is much longer. It includes media representations of teachers as well as all actual classroom experiences. Difficulty lies in the contradictory nature of these two apprenticeships. While constructivist models of learning are often examined at the university, prior experience tends to be of typical, behaviorist kinds of classrooms. Also, in the accidental apprenticeship "observations are grounded in [the] student perspective ... teaching is reduced to method, activity and management ... [Students do] not necessarily ... see pedagogy's relationship to theory" (Ritchie & Wilson, 2000, p. 37, 28).

When teachers then enter the field of teaching, they enter institutions still largely dominated by typical assumptions of learning. They are confronted with curriculum guides, experienced teachers, and student behaviours (Ritchie & Wilson, 2000) which often contradict what they have learned. Teachers tend to fall back on their accidental apprenticeship. The community of practice (Lave & Wenger, 1999), experienced teachers, also exerts its own pressure: "We were drawn into *collective* patterns of expectation and behavior... In this 'community of practice,' there existed a general ... 'understanding' of how things were done" (Davis & Sumara, 1997, p. 114).

Strategies

One of the things I had hoped to uncover was the use of strategies in spelling. The research on good versus poor spellers indicated that good spellers use a variety of strategies and know when to use them. Poor spellers tend to have limited strategies and rely on sound (Anderson, 1991; Hughes & Searle, 1997; Kosnik, 1998).

Teachers and Strategies

Donna explicitly taught students to use resources, such as the word wall and wordbooks, during writing. Informally, she almost always

demonstrated a reliance on phonetic information. Donna encouraged her students to try and sound out the words; the students in grade three all indicated they sounded words out. Two of them used the word wall and their wordbooks. The most accurate speller also used analogy and visual memory.

I did not observe any spelling strategy instruction in Aaron's class, either formally or informally. When asked how he helped students with unknown words in writing he replied that he told them to try their best. If they did not think it was correct, they could use the computer's spell check program, a dictionary or ask an adult. He thought the students tended to ask. Again the three grade five students indicated they figured out words by sounding them out. Lynn's only other strategy was to ask. Both Constantine and Joe said they occasionally looked in a dictionary, and Joe sometimes asked. These were the strategies encouraged in the classroom. Constantine stated he used similar words. Joe also used this strategy but did not name it in the interview. Both Joe and Constantine recalled words from their reading during writing time and wrote possible options for spelling words to try and use their visual memories. Neither articulated these as strategies they employed. While they demonstrated metalinguistic knowledge, they appeared to be lacking in some metacognitive knowledge of

their own processes, the alternative strategies they were using. Sounding out was the foremost strategy articulated by both students, but they used many strategies with ease.

This would seem to indicate the students were using the strategies that were being encouraged by their teachers. The teachers were teaching a limited number of strategies formally and informally, and all the students seemed to know what they were and applied them. Interestingly, the better spellers in both grades also applied other strategies such as analogy, relying on visual memory, and making connections with reading material.

Perhaps if the poorer spellers were taught to use these strategies, it would improve their spelling achievement. In Donna's classroom, strategies were taught in reading to help students identify unknown words; students would benefit from knowing similar tools for writing. Discussing reading strategies also helps students become metacognitively aware; they become conscious of what strategies they are using. They must also think about which strategy would work best in a given situation. Similarly, instruction in spelling strategies might assist students in realizing what they are doing during writing, when certain strategies are appropriate, and when they should try a different strategy. Templeton (2003) noted that most students

describe their primary strategy as sounding out despite their ability to use a variety of strategies as was demonstrated by most of these students. I did not observe any strategic teaching about spelling.

Parents and Strategies

Parents' thoughts on spelling were varied. For some memory and knowledge of rules were important. Half the parents indicated that a desire to find out correct spellings and use resources contributed to being a good speller. All the parents said they used dictionaries or computers for themselves and most of them also used them with their children or encouraged them to use those resources. Every parent in this study had helped their children study for tests. This presented no difficulties for the families of the average and above average students. For the lower students, one mother saw the tests and practice as frustrating and demoralizing and the other thought that the practice had helped her child. Differences in opinion could be attributed to many possible factors. People tend to operate out of their own lived experiences. Each parent's perception would have been shaped on their own experiences as students and the teachers they have encountered as adults. Differing levels of education, spelling ability, and comfort with school in general might also vary among the parents. Parental

relationships and differing student personalities could also contribute to differing thoughts on spelling as it related to their children.

As was observed at school with the teacher, students' strategies employed at home seemed consistent with what their parents encouraged. At home, most of the students said they would consult a dictionary or the computer if they wanted to find how to spell a word. However, five out of the six said that sounding out was their number one strategy; the sixth put that as fourth. Two students thought they would look up their words and four of them said they asked for help when stuck.

At school, the grade three students all said they would use resources such as the word wall and wordbooks, which were encouraged by the teacher. Again, the students listed sounding out as their first strategy and two of them said ask. Under observation, the grade threes and the below average grade five, all used sound-symbol correspondence. All of the students tried to call on visual memory, finding words that looked wrong. Several students tried different ways of spelling to see if they could choose which looked right. Three of the students used analogy. These other strategies were not talked about by the teachers as strategies they taught nor were they

mentioned by the parents. Perhaps they were taught in previous grades or the students picked them up on their own.

Attitude

Good spellers not only think they can solve spelling problems but that it is their responsibility to spell correctly. They demonstrate a *spelling conscience* (Turbill, 2000). The theme of a proactive attitude in good spellers surfaced in many of the interviews. Half of the parents thought desire and determination were essential for a good speller, as did the grade five teacher. The grade fives also thought good spellers took more time and checked over their work. The students who were poorer spellers demonstrated avoidance behaviour. Both tried to get out of work at home. At school, they displayed few independent strategies and chose to ask for help. The issue for teachers then becomes how to improve students' attitudes towards spelling. As the poorer spellers showed an inclination towards avoiding situations where they were required to spell, it is likely they have experienced limited success in spelling. One way to change this could be to ensure the work and expectations for these students falls in their instructional level so as to avoid further frustration due to failure. In my experience, students benefit from continually experiencing success and

gradually increasing the difficulty of tasks when appropriate. Successful students are more likely to see themselves as readers and writers and therefore feel capable of attempting their assignments.

Teacher/Parent

Some teachers perceive the weekly list and test as a parental expectation. Perhaps they have had experiences where parents have queried them if there were not tests or other teachers have told them it is an expectation. I think it is possible that parents expect this because that is their own experience. This is how it was done when they were students or what they have experienced with other teachers. It becomes a circle; teachers give weekly lists and tests because parents expect it and parents make sure they get it done because teachers expect it.

In this study, two of the parents wanted to see spelling practice continue in that way. However, I heard from several of the parents that what they really wanted was more information regarding expectations, teacher practice, and their own children. There seemed to be little in the way of communication between the parents and the teachers. The teachers expressed limited expectations for the parents around spelling. Donna wanted the parents to read with their children, and Aaron thought parents

could help students re-sort at home. In my experience, the parents did not often raise issues with the teachers unless there was a large problem or it was report card time. Often it was the parents of the stronger students who were more willing to ask teachers for clarification. While all of the parents in this study had questions, the parents of the students with the most difficulties were the least likely to ask the teachers. Shannon would have liked to know about Lynn's homework requirements but had not asked the teacher. Michelle was very concerned about Kayla's progress but felt that when she had previously spoken to the teachers, they had not expressed a similar concern.

This reticence to bring up issues with the teachers may be due to authority. The teachers may be viewed as having higher education and knowledge. I find it difficult, myself, to question the professional judgment of the teachers who teach my own children even when I disagree with them. There may be differences in socio-economic status causing barriers. Also, previous experience in schools or with teachers may not have been positive, causing parents to want to distance themselves.

The parents and teachers seemed to have differing ideas and expectations around spelling. The teachers in this study demonstrated an

awareness of the developmental nature of learning and were striving to use differentiated instruction within their spelling programs to address this. As similar changes have occurred in many subject areas, it makes it difficult to share with parents all that goes on in the school day; it is difficult to determine what is important for them to know.

Schools are not currently set up to facilitate communication between parents and teachers. Interviews or conferences are usually about teacher expectations for individual students and the report cards. Fifteen minutes is not enough to discuss all aspects of even that one child and their education. 'Meet the Teacher' nights usually involve presentations by the teachers and a few general questions from the parents. Parents do not get one on one time with the teachers, nor is there an opportunity to tell the teacher about your child. Another issue is poor attendance. Aside from the reasons previously enumerated, parents may not attend due to the absence of their voice.

At issue is how to improve communication and exchange of information between parents and teachers. Making schools more inviting for parents could bring more parents into the schools. If they saw the education of their children as a collaborative effort, they might be more inclined to

participate. Providing spaces and times for hearing and valuing what parents know and can bring to the schools about their children could also aid this process. As teachers, we could facilitate this process by re-imagining our time spent together with parents. Perhaps additional times could be set aside where both parents and teachers have the opportunity to talk. The purpose would be to discuss what they feel is most important in the life of the child rather than always meeting over something prescribed such as the report card.

Professional Conclusions and Questions

The Saskatchewan provincial language arts curriculum (Saskatchewan Learning, 2002) and other research (e.g. Gentry, 1991; Henderson & Templeton, 1991; Kosnik, 1998) strongly support the use of a combined method of instruction. Recommended are word sorts, individualized tests and writing with proofreading. "There is no program, no book, no speller... that alone will build language competence in a child" (Booth, 1991, p. 7). It is important not only for teachers to recognize the interconnectedness of word study and writing but to show it to their students, to make the implicit, explicit for the students. When teachers allow time to work individually with students, it is easier to scaffold their attempts to put this into practice.

Students benefit from being allowed time to try different strategies and from assistance in choosing the best strategy given the situation. I have seen this kind of instruction in reading but not in writing. Process is being stressed in reading but not in writing in the same way. Some teachers teach the writing process, draft, revise, and edit but there does not seem to be a connection being made between word knowledge and writing.

Allington (2001) contended, "much of what we have learned ... in the past thirty years ... is being systematically ignored" (p. vii). How do we close this "knowing-doing gap" (DuFour, Eaker, & DuFour, 2005)? In many ways it involves a shift in the culture of teachers and schools. Following constructivist thought, knowledge is constructed by learners, through action, it is not "given" or handed down. If this is true for students, it is also true for teachers. If we stop thinking of teaching as a set of skills, activities, and methods, we can then view it as a process. In this process, teachers would learn with their students how best to guide them. Educators have often sought the one right answer, the silver bullet. Just as there is no one appropriate spelling program, teacher professional development can be viewed as an "ongoing process rather than a new program to be adopted or a new project to complete" (DuFour, Eaker, & DuFour, 2005, p. 233).

How do we affect teacher change? Ritchie and Wilson (2000) believed that "what is necessary is reflection *and* action" (p. 88). When teachers reflect on their own practices as well as their past experiences, they can uncover the underlying assumptions. It is important to do this in the context of "practicing their developing theories" (Ritchie & Wilson, 2000, p. 88). Essential to this process is a community. If teachers forge new communities of practice, they can engage in critical, reflective thinking that will support action in classrooms; "it is within social exchanges that we should look for advances in individuals' ways of thinking and acting" (Rogoff, 1990, p. 195).

The potential for teacher change ... is not located in programs or classes that do something *to* teachers or give teachers new "methods" or information. Instead change is made possible and becomes sustainable when teachers gain critical perspective on ... how cultural narratives of teaching have shaped their personal and professional subjectivities (Ritchie & Wilson, 2000, p. 189).

We can shift the conceptualization of teaching from what teachers do to why they do it.

Suggestions for Further Research

Suggestions about further research include research on spelling and teacher education/professional development:

- This study involved two classrooms from two schools.
 - What are the experiences of students, parents, and teachers in other settings?
- One of the purposes of this study was to uncover students' strategies in spelling. Explicit instruction in spelling strategies was not evident in this study. It is especially important for struggling spellers, as they tend to use limited strategies when compared with proficient spellers (Anderson, 1991; Hughes & Searle, 1997).
 - How are other teachers teaching students to be strategic spellers?
 - What are effective practices for teaching strategies to students?
 - How do teachers teach metacognitive strategies and how are they necessary in order to effectively use different strategies?

- Aside from spelling instruction, the topic of teacher learning came out of this study. The teachers in this study chose to adopt new teaching methods but seemed unable to fully implement them. Teacher professional development, both pre and in-service, is important to affect change. Although there is already an existing body of literature on teacher education, this study pointed to the lack of transfer to the everyday practice of teachers.
 - How can teacher practice more effectively be influenced?
 - What implication does this have for in-service professional development and pre-service teacher education?

Reflecting on Personal Experience

As a researcher, I learned many things, some expected and some unexpected, which have cause me to reflect on my own practice and challenge my own assumptions. While it was my intention to be open to whatever presented itself, prior to data collection, I had some expectations of what I would find. I knew that these teachers were trying a new program and I was interested to see how they were using it and how or if they were integrating it into other areas of language arts. My findings led me to question teacher change, which became one of the main themes.

I can foresee this impacting me in a variety of ways. As I head back to the classroom, I think I would like to be involved in supervision or peer coaching. I think it will be important to be observed and to have someone help me to question why I have chosen the teaching practices I have. It is sometimes difficult to stand outside yourself and challenge what you think and do; an outside observer can bring a different perspective.

In my work with other teachers, I am torn as how best to proceed. In my role as coach, I have done more to assist teachers in implementing new methods than examining theories and assumptions. This may contribute to the observed phenomenon of teachers adopting constructivist approaches and using them in typical ways. For myself, I still like in-service type professional development as it can introduce me to new ideas or cause me to think about old ones in a different way. However, the literature indicated that critical reflection, uncovering assumptions, and understanding theories about learning is the way to teacher change (e.g. Ritchie & Wilson, 2000). Therefore, I will need to provide opportunities to observe, act, and reflect (Ritchie & Wilson, 2000). This could be done by having teachers observe me and use that as a basis for discussion, or by finding partners for teachers to work with. Working critically with other teachers creates a community of

learners, which is another critical component necessary for teacher change (Rogoff, 1990; DuFour, Eaker & Dufour, 2005).

In language arts instruction, I had assumed more writing was important and both the data and literature supported this. However, while I have instructed my students in reading strategies, I have not done the same for writing and spelling. In the future, I will include explicit instruction in spelling strategies. The students in this study used strategies that the teacher encouraged but the stronger students also had other strategies. I would like to afford the struggling students the opportunity to access more strategies as well.

This study also challenged my ideas about parent-teacher interactions. I would like to go forward and try to give parents more of a voice, to honour what they know about their own children and what they want to know about my classroom and the school. That may be as simple as asking them to speak before I do when we meet. Perhaps I will need to engineer more contact time even if that has to be by phone rather than in person.

While this study was about spelling and students' strategies, it also offered insight into teaching and learning, and the relationships between schools and families. In the move towards continuous improvement, I think

it will be increasingly important to open dialogues: dialogues among teachers to discuss why along with what, and how they teach; and dialogues with parents so that their voice can be heard in the process of educating their children. Much like children who recreate the history of the English language as they learn to write (Invernizzi & Hayes, 2004; Templeton & Morris, 1996), perhaps we need to recreate teaching and learning with each of our students.

References

- Adams, M. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: The MIT Press.
- Airasian, P.W. & Walsh, M.E. (1997). Constructivist cautions. *Phi Delta Kappan*, 78(6), 444-449. Retrieved October 25, 2006, from the ProQuest Educational Journals Database.
- Allal, L. (1997). Learning to spell in the classroom. In C. A. Perfetti, L. Reubin, & M. Karol (Ed.), *Learning to spell: Research, theory, and practice across languages* (pp. 129-150). Mahwah, N.J.: Lawrence Erlbaum Associates.
- Allington, R.L. (2001). *What really matters for struggling readers*. New York: Addison-Wesley Educational Publishers Inc.
- Anderson, Dr. K. F. (1991). Using a spelling survey to assess students' strategies and errors. In D. Booth (Ed.), *Spelling links: Reflections on spelling and its place in the curriculum* (pp. 37-45). Markham, ON: Pembroke Publishers Limited.
- Barton, D. & Hamilton, M. (1998). *Local literacies: Reading and writing in one Community*. London: Routledge.
- Bear, D. R., Invernizzi, M., Templeton, S., & Johnston, F. (2004). *Words their way: Word study for phonics, vocabulary, and spelling instruction*. Upper Saddle River: N.J.: Pearson Education Inc.
- Beckham-Hungler, D. & Williams, C. (2003). Teaching words that students misspell: Spelling instruction and young children's writing. *Language Arts*, 80(4), 299-307.
- Beers, Dr. C. S. & Beers, Dr. J. (1991). A developmental basis for spelling instruction. In D. Booth (Ed.), *Spelling links: Reflections on spelling and its place in the curriculum* (pp. 25-36). Markham, ON: Pembroke Publishers Limited.

- Beers, J. W. (1980). Developmental strategies of spelling competence in primary school children. In E. H. Henderson & J. W. Beers (Ed.), *Developmental and cognitive aspects of learning to spell* (pp. 36-45). Newark, Delaware: International Reading Association, Inc.
- Booth, D. (Ed.). (1991). *Spelling Links*. Markham, ON: Pembroke Publishers Limited.
- Bruner, J. S. (1960). *The Process of education*. Cambridge, MA: Harvard University Press.
- Bruner, J. S. (1966). *Toward a theory of instruction*. Cambridge, MA: Harvard University Press.
- Bruner, J. S. (1973). *Beyond the information given: Studies in the psychology of knowing*. New York: WW Norton & Company Inc.
- Calkins, L. M. (1994). *The art of teaching writing* (New ed.). Portsmouth, NH: Heinemann
- Clay, M. M. (1979). *Reading: the patterning of complex behavior* (2nd ed.). Auckland, New Zealand: Heinemann.
- Clay, M. M. (1991). *Becoming literate: The construction of inner control*. Auckland, New Zealand: Heinemann.
- Courtney, Dr. R. (1991). A spelling history. In D. Booth (Ed.), *Spelling links: Reflections on spelling and its place in the curriculum* (pp. 13-24). Markham, ON: Pembroke Publishers Limited.
- Davis, B. & Sumara, D.J. (1997). Cognitive complexity, and teacher education. *Harvard Educational Review*, 67(1), 105-125. Retrieved April 18, 2007, from the ProQuest Educational Journals Database.
- Dixon-Krauss, L. (1996). *Vygotsky in the classroom: Mediated literacy instruction and assessment*. White Plains, NY: Longman Publishers.
- Driscoll, M. P. (2000). *Psychology for learning instruction* (2nd ed.). New

York: Allyn & Bacon

- DuFour, R., Eaker, R. & DuFour, R. (2005). Closing the knowing-doing gap. In R. DuFour, R. Eaker, & R. DuFour. (Ed.), *On common ground: The power of professional learning communities* (pp. 225-254). Bloomington: National Educational Service.
- Dyson, A.H. & Freedman, S.W. (2003). Writing. In J. Flood, D. Lapp, J.R. Squire, & J. M. Jensen (Ed.), *Handbook of research on teaching the English language arts* (pp. 967-992). Mahwah, N.J.: Lawrence Erlbaum Associates.
- Ehri, L. C. (1997). Learning to read and learning to spell are one and the same, almost. In C. A. Perfetti, L. Reubin, & M. Karol (Ed.), *Learning to spell: Research, theory, and practice across languages* (pp. 237-269). Mahwah, N.J.: Lawrence Erlbaum Associates.
- Flood, J., Lapp, D., & Fisher, D. (2003). Reading comprehension instruction. In J. Flood, D. Lapp, J. R. Squire, & J. M. Jensen (Ed.), *Handbook of research on teaching the English language arts* (pp. 931-941). Mahwah, N.J.: Lawrence Erlbaum Associates.
- Frith, U. (1980). Unexpected spelling problems. In U. Frith (Ed.), *Cognitive processes in spelling*. London: Academic Press.
- Funnell, E. (1992). On recognizing misspelled words. In C. M. Sterling & C. Robson (Ed.), *Psychology, spelling and education* (pp. 87-99). Clevedon, Avon, England: Multilingual Matters Ltd.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational research: An introduction* (7th ed.). Boston: Allyn and Bacon.
- Gentry, J. R. (1987). *Spel... is a four-letter word*. Richmond Hill, ON: Scholastic.
- Gentry, J. R. (1991). Developmental aspects of learning to spell. In D. Booth (Ed.), *Spelling links: Reflections on spelling and its place in the curriculum* (pp. 37-45). Markham, ON: Pembroke Publishers Limited.

- Gentry, J. R. (2000). A retrospective on invented spelling and a look forward. *The Reading Teacher*, 54(3), 318-332. Retrieved May 13, 2006 from ProQuest database.
- Gentry, J. R. (2004). *The science of spelling: The explicit specifics that make great readers and writers (and spellers!)*. Portsmouth, NH: Heinemann.
- Heald-Taylor, B. G. (1998). Three paradigms of spelling instruction in grades 3 to 6. *The Reading Teacher*, 52(5), 404-413. Retrieved May 13, 2006 from ProQuest database.
- Henderson, E.H. & Templeton, S. (1991). A developmental perspective of spelling instruction through alphabet, pattern, and meaning. In D. Booth (Ed.), *Spelling links: Reflections on spelling and its place in the curriculum* (pp. 46-81). Markham, ON: Pembroke Publishers Limited.
- Hughes, M. & Searle, D. (1997). *The violent E and other tricky sounds: Learning to spell from kindergarten through grade 6*. Markham, ON: Pembroke Publishers Limited.
- Hughes, M. & Searle, D. (2000). Spelling and the second R. *Language Arts*, 77(3), 203-223.
- Invernizzi, M. & Abouzeid, M. (1994). Using students' invented spelling as a guide for spelling instruction that emphasizes word study. *The Elementary School Journal*, 95(2), 155-167.
- Invernizzi, M. & Hayes, L. (2004). Developmental spelling research: A systematic imperative. *Reading Research Quarterly*, 39(2), 216-228.
- Johnston, F.R., Invernizzi, M., Bear, D.R. & Templeton, S. (2005) *Words their way: Word sorts of syllable and affix spellers*. Upper Saddle River, NJ: Pearson education Inc.
- Kosnik, C. (1998). *Spelling in a balanced literacy program*. Toronto, ON: ITP Nelson.

- Lave, J. & Wenger, E. (1999). Learning and pedagogy in communities of practice. In J. Leach & B. Moon (Ed.), *Learners and pedagogy* (pp. 21-33). London: Paul Chapman Publishing Limited.
- Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic Inquiry*. Beverly Hills: Sage Publications.
- McGee, L. M. & Richgels, D. J. (1990). *Literacy's beginnings*. Needham Heights, MA: Allyn & Bacon.
- McGee, L. M. & Richgels, D. (2000). *Literacy's beginning: Supporting young readers and writers* (3rd ed.). Boston: Allyn and Bacon.
- Perfetti, C. A. (1997). The psycholinguistics of spelling and reading. In C. A. Perfetti, L. Reubin, & M. Karol (Ed.), *Learning to spell: Research, theory, and practice across languages* (pp. 21-38). Mahwah, N.J.: Lawrence Erlbaum Associates.
- Piaget, J. (1952). *The origins of intelligence in children*. New York: International Universities Press.
- Piaget, J. (1973). *The language and thought of the child*. New York: World
- Pinnel, G. S. & Fountas, I. C. (1998). *Word matters: teaching phonics and spelling in the reading/writing classroom*. Portsmouth, NH: Heinemann.
- Read, C. (1971). Pre-school children's knowledge of English phonology. *Harvard educational review*, 41, 1-34.
- Read, C. (1986). *Children's creative spelling*. London: Routledge & Keegan Paul.
- Richgels, D. J. (2002). Invented spelling, phonemic awareness, and reading and writing instruction. In S. B. Newman & D. K. Dickenson (Ed.), *Handbook of early literacy research*. (pp. 142-155). New York: The Guilford Press.
- Ritchie, J.S. & Wilson, D.E. (2000). *Teacher narrative as critical inquiry*. New

- York: Teachers College Press.
- Rogoff, B.C. (1990). *Apprenticeship in thinking: Cognitive development in social context*. New York: Oxford University Press.
- Sabey, B. L. (1999). Metacognitive responses of an intermediate speller while performing three literacy tasks. *Journal of Literacy Research*, 31(4), 415-448. Retrieved May 13, 2006 from ProQuest database.
- Saskatchewan Learning (2002). *English Language Arts: A curriculum guide for the elementary level (K-5)*. Regina, SK: Author.
- Schallert, D., & Martin, D. (2003). A psychological analysis of what teachers and students do in the language arts classroom. In J. Flood, D. Lapp, J. R. Squire, & J. M. Jensen (Ed.), *Handbook of research on teaching the English language arts* (pp. 31-45). Mahwah, N.J.: Lawrence Erlbaum Associates.
- Schlagal, B. (2002). Classroom spelling instruction: History, research, and practice. *Reading Research and Instruction*, 42(1), 44-57.
- Scott, C. M. (2000). Principles and methods of spelling instruction: applications for poor spellers. *Topics in Language Disorders*, 20(3), 66-83. Retrieved November 16, 2005 from ProQuest database.
- Sullivan, M. (1994). *Assessment Records Portfolio*. Richmond Hill, ON: Scholastic Canada Limited.
- Templeton, S. (1991). Teaching and learning the English spelling system: Reconceptualizing method and purpose. *The Elementary School Journal*, 92(2), 185-210.
- Templeton, S. (2003). Spelling. In J. Flood, D. Lapp, J. R. Squire, & J. M. Jensen (Ed.), *Handbook of research on teaching the English language arts* (pp. 738-751). Mahwah, N.J.: Lawrence Erlbaum Associates.
- Templeton, S. (2003). Spelling: Best idea = best practices. [Electronic Version]. *Voices From the Middle*, 10(4), 48-49.

- Templeton, S. & Morris, D. (1999). Questions teachers ask about spelling. *Reading Research Quarterly*, 34(10), 102-112.
- Turbill, J. (2000). Developing a spelling conscience. *Language Arts*, 77(3), 209-217.
- Vygotsky, L.S. (1962). *Thought and language*. Cambridge: MIT Press.
- Vacca, J. L., Vacca, R. T., & Gove, M. K. (2000). *Reading and learning to read* (4th ed.). New York: Addison-Wesley educational Publishers Inc.
- Wilde, S. (1992). *You can red this!: Spelling and punctuation for whole language classrooms, K-6*. Portsmouth, NH: Heinemann.
- Zutell, J. (1998). Word sorting: a developmental spelling approach to word study for delayed readers. *Reading Research Quarterly*, 14(2), 219-239. Retrieved November 15, 2005 from Academic Search Premier database.

Appendix A

Request for Permission

October ____ , 2006

Superintendent of Education
_____ Schools

Dear Sir,

I am writing to request permission to conduct a study in your division, entitled *Spelling: A Study of Grade Three and Five/Six Students' Strategic Use of Spelling Knowledge*. As you know, I am an employee of your school division and am currently completing my Master of Education at the University of Saskatchewan.

With your permission, my research study will be a case study conducted in one school. I will focus on the classrooms of two teachers at two different grade levels. I would like to interview the two teachers, three students from each grade, and the students' parents. I will also observe lessons, teacher and student interactions, and independent student work.

This study was approved by the Behavioural Research Ethics Board (Beh-REB) University of Saskatchewan on _____. All documents related to the "Application for Approval of Research Protocol" are attached. If you have any questions regarding this proposed study, please feel free to contact me, Tracy Kernaghan @ 659-7167, 653-3252, Angela Ward @ 966-7585, Department of Curriculum studies, my research supervisor, or the Ethics Officer @ 966-2084.

Thank you for your time in considering this request for permission to conduct this research within your school division.

Sincerely,
Tracy Kernaghan
M. Ed. Candidate
College of Education, University of Saskatchewan

Appendix B

Informed Consent Form - Teacher

Dear Teacher:

I appreciate your participation in my research study: *Spelling: A Study of Grade Three and Five/Six Students' Strategic Use of Spelling Knowledge*. Please read this form carefully, and feel free to ask any additional questions that you might have.

1. Research Supervisor:

Dr. Angela Ward: 966-7585
Department of Curriculum Studies

Graduate Student:

Tracy Kernaghan: 653-3252
Department of Curriculum
Studies

2. Methods/Procedures:

In my study, I will investigate the spelling strategies that students are using. I will also examine teacher, parent and student perceptions about spelling and teacher instructional practices with regards to spelling. This study has been given approval by the Behavioural Research Ethics board (Beh-REB), University of Saskatchewan on _____ and the school division on _____.

I will interview you once for approximately 30 minutes. The interview will be audio taped. You have the right to ask for the audio recording to be stopped at any point in the interview. The audio recording will be transcribed and you will have the opportunity to review and/or revise the final transcript. You will then be asked to sign a transcript release form so that I can use that information in my study. I will provide the questions in advance to allow you the opportunity to reflect on them prior to our interview. You may withdraw from the study at any time without cause or penalty and data collected will be destroyed. I will also be gathering information in your classroom, through participant observation, about teacher instruction and student activities/learning with regards to spelling.

I will make several visits, observe lessons, small group interactions and independent student work. I will collect writing samples from the focus students, making copies and leaving the originals. The data collected will not be used to evaluate teachers, parents, or students in any way.

3. Storage of Data:

During this study, I will keep the data, including audiotapes and transcripts. Only Angela Ward (my supervisor) and I will look at it. After the completion of the study, the data will be kept in a secure location at the University of Saskatchewan for five years and then will be destroyed in accordance with the University of Saskatchewan guidelines.

4. Confidentiality

The results of this study will be used to fulfill partial requirements of my Master of Education degree in Curriculum Studies. Later, the study might be published as an article in a scholarly journal or presented at a conference/seminar. The confidentiality and anonymity of participants will be protected using pseudonyms.

Direct quotations from the interviews may be reported in the study. While pseudonyms will always be used, there is a possibility of being identified based on what is reported, given that there is only a small group of participants.

5. Potential Risks and Benefits:

There are no known risks for participating in this study. Every effort will be made to protect the names of individuals, the school, and the school division. Personal interviews will be scheduled at a time and location that is suitable to you, the participant.

Your participation in this study will provide you with an opportunity to reflect upon your own beliefs and practices with regards to spelling. Your participation also has the potential to be of wider benefit to the educational community. This study may assist us as we try to further understand the strategies students are using in spelling, the possible role that students', teachers' and parents' perceptions play, as well as the level of impact of instructional practices. Your participation in the study will not be used to evaluate your teaching in any way.

6. Questions:

If at any time you have questions concerning this study, please feel free to contact me or my supervisor, Dr. Angela Ward, at the telephone numbers provided in section 1. Any additional questions regarding your rights as participants can be addressed to the Ethics Officer (966-2084).

7. Consent to Participate:

I have read and understood the description provided above. I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I consent to participate in the study described above, understanding that I may withdraw at any time without cause or penalty and that any data collected will be destroyed. A copy of this consent form has been given to me for my records.

(Signature of Participant)

(Date)

(Signature of Researcher)

(Date)

Tracy Kernaghan
907-10th Street East
Saskatoon, SK S7H 0H6
653-3252

Appendix C

Informed Consent Form - Parent

Dear Parent:

I appreciate your participation in my research study: *Spelling: A Study of Grade Three and Five/Six Students' Strategic Use of Spelling Knowledge*. Please read this form carefully, and feel free to ask any additional questions that you might have.

1. Research Supervisor:

Dr. Angela Ward: 966-7585
Department of Curriculum Studies

Graduate Student:

Tracy Kernaghan: 653-3252
Department of Curriculum
Studies

2. Methods/Procedures:

In my study, I will investigate the spelling strategies that students are using. I will also examine teacher, parent and student perceptions about spelling and teacher instructional practices with regards to spelling. This study has been given approval by the Behavioural Research ethics board (Beh-REB), University of Saskatchewan on _____ and the school division on_____.

I will interview you once for approximately 30 minutes. The interview will be audio taped. You have the right to ask for the audio recording to be stopped at any point in the interview. The audio recording will be transcribed and you will have the opportunity to review and/or revise the final transcript. You will then be asked to sign a transcript release form so that I can use that information in my study. I will provide the questions in advance to allow you the opportunity to reflect on them prior to our interview. You may withdraw from the study at any time without cause or penalty and data collected will be destroyed.

3. Storage of Data:

During this study, I will keep the data, including audiotapes and transcripts. Only Angela Ward (my supervisor) and I will look at it. After the completion of the study, the data will be kept in a secure location at the University of Saskatchewan for five years and then will be destroyed in accordance with the University of Saskatchewan guidelines.

4. Confidentiality

The results of this study will be used to fulfill partial requirements of my Master of Education degree in Curriculum Studies. Later, the study might be published as an article in a scholarly journal or presented at a conference/seminar. The confidentiality and anonymity of participants will be protected using pseudonyms.

Direct quotations from the interviews may be reported in the study. While pseudonyms will always be used, there is a possibility of being identified based on what is reported, given that there is only a small group of participants.

5. Potential Risks and Benefits:

There are no known risks for participating in this study. Every effort will be made to protect the names of individuals, the school, and the school division. Personal interviews will be scheduled at a time and location that is suitable to you, the participant.

You, as a parent are an important part of this research. You will be given an opportunity to express your thoughts, ideas, and understandings regarding spelling, how it was taught to you, and how you work with your child or see your child work with spelling issues. Your child's marks will not be affected in any way by your participation in this study.

6. Questions:

If at any time you have questions concerning this study, please feel free to contact me or my supervisor, Dr. Angela Ward, at the telephone numbers provided in section 1. Any additional questions regarding your rights as participants can be addressed to the Ethics Officer (966-2084).

7. Consent to Participate:

I have read and understood the description provided above. I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I consent to participate in the study described above, understanding that I may withdraw at any time without cause or penalty and that any data collected will be destroyed. A copy of this consent form has been given to me for my records.

(Signature of Participant)

(Date)

(Signature of Researcher)

(Date)

Tracy Kernaghan
907-10th Street East
Saskatoon, SK S7H 0H6
653-3252

Appendix D

Parent Consent for Student to Participate Form

Dear Parent:

Your son/daughter is being invited to participate in a study entitled *Spelling: A Study of Grade Three and Five/Six Students' Strategic Use of Spelling Knowledge*. Please read this form carefully, and feel free to ask any additional questions that you might have.

1. Research Supervisor:

Dr. Angela Ward: 966-7585
Department of Curriculum Studies

Graduate Student:

Tracy Kernaghan: 653-3252
Department of Curriculum
Studies

2. Methods/Procedures:

In my study, I will investigate the spelling strategies that students are using. I will also examine teacher, parent and student perceptions about spelling and teacher instructional practices with regards to spelling. This study has been given approval by the Behavioural Research ethics board (Beh-REB), University of Saskatchewan on _____ and the school division on _____.

Your son/daughter will be the primary focus of this research. He/she will be given the opportunity to complete a self-reflection sheet on their spelling. He/she will also be observed in the classroom during spelling and writing related activities.

I will interview your son/daughter once for approximately 20 minutes. The interview will be audio taped. She/he will have the right to ask for the audio recording to be stopped at any point in the interview. The audio recording will be written out (transcribed). He/she may withdraw from the study at any time without cause or penalty and data collected will be destroyed. I will also collect a few pieces of writing from your son/daughter.

Copies will be made for the study and the originals will be left in the classroom.

Neither participation nor lack of participation will affect your child's marks or evaluation done at the school. The data collected will not be used to evaluate teachers, parents, or students in any way.

3. Storage of Data:

During this study, I will keep the data, including audiotapes and transcripts. Only Angela Ward (my supervisor) and I will look at it. After the completion of the study, the data will be kept in a secure location at the University of Saskatchewan for five years and then will be destroyed in accordance with the University of Saskatchewan guidelines.

4. Confidentiality

The results of this study will be used to fulfill partial requirements of my Master of Education degree in Curriculum Studies. Later, the study might be published as an article in a scholarly journal or presented at a conference/seminar. The confidentiality and anonymity of participants will be protected using pseudonyms.

Direct quotations from the interviews may be reported in the study. While pseudonyms will always be used, there is a possibility of being identified based on what is reported, given that there is only a small group of participants.

5. Potential Risks and Benefits:

There are no known risks for participating in this study. Every effort will be made to protect the names of individuals, the school, and the school division. Personal interviews will take place at school in a familiar setting.

Although there are no guarantees of benefits, this research may help shed light on what students are doing and thinking about in spelling, the possible role that students', teachers' and parents' perceptions play, as well as the level of impact of instructional practices.

6. Questions:

If at any time you have questions concerning this study, please feel free to contact me or my supervisor, Dr. Angela Ward, at the telephone numbers provided in section 1. Any additional questions regarding your rights as participants can be addressed to the Ethics Officer (966-2084).

7. Consent to Participate:

I have read and understood the description provided above. I have been provided with an opportunity to ask questions and my questions have been answered satisfactorily. I consent for my son/daughter to participate in the study described above, understanding that I may withdraw this consent at any time without cause or penalty and that any data collected will be destroyed. A copy of this consent form has been given to me for my records.

(Signature of Parent/Guardian)

(Date)

(Signature of Researcher)

(Date)

Tracy Kernaghan
907-10th Street East
Saskatoon, SK S7H 0H6
653-3252

Appendix E

Assent for Student to Participate

(This letter will be read aloud to the student)

Dear Student:

I am interested in learning how students learn about spelling. I can learn a lot from talking and working with you on your spelling and writing. I would like to ask your permission to talk and work with you because you can help teach me about how kids learn.

I would like to talk to you for about 20 minutes. I would like to tape record some of the things that you say so that I can remember your ideas. After we talk, you can listen to the tape recording so that you can make sure what you said is what you wanted to share. We will also look at and talk about some of your writing. I would like to take copies of a few pieces of your writing to look at.

When I finish the study, I will write about how you and other students are learning spelling so that others will understand the excellent work that you are doing. I will not use your real name; if you want, you can help me make up a name. When the study is finished, the tapes will be safely stored at the University of Saskatchewan. Talking to me in this study is your choice. If you choose, you can withdraw from the study at any time and no one will be angry with you. If that is the case, I will not use any of the information that you have shared with me. None of this will affect your marks.

If you are willing to talk with me in this study, please sign and put the date on this form. A copy will be given to you to keep in a safe place.

I agree to participate in the above study as explained to me. I understand the guidelines and have been allowed to ask questions. I understand that I may withdraw at any time. A copy of this consent form has been given to me for my records.

(Signature of Student)

(Date)

(Signature of Researcher)

(Date)

This study has been given approval by the Behavioural Research Ethics board (Beh-REB), University of Saskatchewan on _____ and the school division on_____.

If at any time you have questions concerning this study, please feel free to contact me, Tracy Kernaghan 653-3252 or my supervisor, Dr. Angela Ward, Department of Curriculum Studies, College of Education, 966- 7585. Any additional questions regarding your rights as participants can be addressed to the Ethics Officer (966-2084).

Appendix F

Student Interview

Spelling Concepts and Attitudes

1. Why is spelling important?
2. When is it important to spell correctly?
3. Do you use text messaging on a computer/ How do you spell then?
4. Who's a good speller that you know? What makes him/her a good speller? Does he/she ever make a spelling mistake?
5. How do people learn how to spell? How did you learn how to spell? Are you still learning?
6. If you were teaching a kindergartener how to write words, what would you do? Anything else?
7. What are some words that are tricky for you? Why do you think they're hard?
8. What are some of the ways that your teacher helps you to spell?
9. How can you get better at writing new words?

Spelling Strategies

10. What do you do when you don't know how to spell a word? What else could you do?
11. Where in the classroom would you look if you wanted to find how to spell a word?
12. If you were at home, where would you look?
13. How do you know when you haven't spelled something right?
14. What do you do when you haven't spelled something right?

Questions about Specific Spellings

Students will compose a short piece of writing and bring along an unedited piece of writing. Have student circle the words that they think are misspelled or those they had trouble with while writing.

15. How did you figure out how to spell this word?

16. Tell/show me how you would change them to the right spelling.

Given a few trouble words, have the student try and "think aloud" or explain how they came up with the correct spelling.

Adapted from Anderson (1991), Fountas and Pinnel (1998), and Wilde (1992).

Appendix G

Parent Interview

1. When is it important to spell correctly?
2. What makes a good speller?
3. How did you learn how to spell?
4. What can/do you do if you don't know how to spell a word?
5. How do you know if your child is a good speller?
6. How do you help your child with spelling? Formal spelling/ homework?
Other home writing (letters/cards)?
7. How do you feel about the spelling homework that your child brings home?
8. What would you like to say to/ask teachers about spelling?

Appendix H

Teacher Interview

1. What are your views on spelling, your philosophy of spelling?
2. When is it important to spell correctly?
3. What makes a good speller?
4. How did you learn to spell?
5. What can/do you do if you don't know how to spell a word?
6. How do you teach spelling? What else do you do? How do you address spelling during writing?
7. Are there any changes that you would like to make to how you teach spelling?
8. How do you utilize parents to help support the teaching/learning of spelling? At school? At home? Formally? Informally?

Appendix I

Student Self-Reflection

Mark the following as they apply to your approach to spelling and to new words. U - usually, S - sometimes, N - never

When I am writing and I come to a word that I don't know how to spell ...

_____ I write the word the first way that comes into my head, and I keep going.

_____ I try to sound out the word.

_____ I check to see if the word looks right.

_____ I find it hard to go on writing until I am sure of the spelling.

_____ I look around the room and at books and word lists trying to find the word.

_____ I ask someone how to spell it.

_____ I use rules to help me to spell it.

_____ I spell it like a similar word that I know how to spell.

_____ I re-read my writing to look for spelling errors.

When I am reading ...

_____ I notice the spelling of words.

_____ I notice when a word is spelled in a way that I wouldn't have expected.

_____ I think of a way to remember a spelling that is new to me.

In general ...

_____ I find words and letter combinations interesting.

_____ I find it easy to picture words and to remember the order of letters.

What I would like to improve in my spelling:

How I could do this:

Adapted from Anderson (1991) and Sullivan (1994).

Appendix J

Data/Transcript Release Form

I, _____ have read the transcript of my interview and agree to release it. I have had the opportunity to clarify, add or delete information so it will accurately represent my own words. I acknowledge that the transcript accurately reflects what I said in my personal interview with Tracy Kernaghan. I authorize the release of this transcript to Tracy Kernaghan to be used in the manner described in the consent form. I have received a copy of this data/transcript release form for my own records.

Appendix K



Behavioural Research Ethics Board (Beh-REB)

12-Dec-2006

Certificate of Approval

PRINCIPAL INVESTIGATOR
Angela Ward

DEPARTMENT
Curriculum Studies

BEH#
06-288

STUDENT RESEARCHERS
Tracy Kernaghan

INSTITUTION(S) WHERE RESEARCH WILL BE CONDUCTED (STUDY SITE)
University of Saskatchewan

Saskatoon SK

SPONSOR
UNFUNDED

TITLE
Spelling: A Study of Grade Three and Five/Six Students' Strategic Use of Spelling Knowledge

CURRENT APPROVAL DATE
12-Dec-2006

EXPIRY DATE
11-Dec-2007

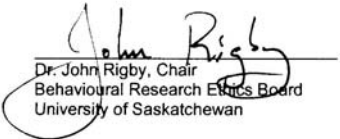
The University of Saskatchewan Behavioural Research Ethics Board has reviewed the above-named research project. The proposal was found to be acceptable on ethical grounds. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to this research project, and for ensuring that the authorized research is carried out according to the conditions outlined in the original protocol submitted for ethics review. This Certificate of Approval is valid for the above time period provided there is no change in experimental protocol or consent process or documents.

Any significant changes to your proposed method, or your consent and recruitment procedures should be reported to the Chair for Research Ethics Board consideration in advance of its implementation.

ONGOING REVIEW REQUIREMENTS

In order to receive annual renewal, a status report must be submitted to the REB Chair for Board consideration within one month of the current expiry date each year the study remains open, and upon study completion. Please refer to the following website for further instructions: <http://www.usask.ca/research/ethical.shtml>

APPROVED


Dr. John Rigby, Chair
Behavioural Research Ethics Board
University of Saskatchewan

Please send all correspondence to:

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University of Saskatchewan
Room 306 Kirk Hall, 117 Science Place
Saskatoon SK S7N 5C8
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