

8-2007

How Do Student's Verbalizations of the Spelling Strategies That They Use Compare to the Spelling Strategies That They Actually Use?

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How Do Student's Verbalizations of the Spelling Strategies That They Use Compare
to the Spelling Strategies That They Actually Use?

by

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August, 2007

A thesis or project submitted to the
Department of Education and Human Development of the
State University of New York College at Brockport
in partial fulfillment of the requirements for the degree of
Master of Science in Education

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Abstract

The purpose of this study was to investigate students' verbalization of the spelling strategies that they use in comparison to the strategies that they are actually using when spelling an unknown word.

Four first grade students (two male and two female) and their female teacher were the participants in this study. The cognitive awareness of the strategies that they are using was measured using an informal interview given to the students before collection of the data through observation. After observing the students the classroom teacher was also interviewed in order to gain a more broad understanding of the strategies that these four students are using.

Analysis was first done on an individual child basis. When analyzing the data I took into consideration: (1) The strategies that the student verbalized they were using (2) The strategies I observed the student using (3) The strategies that the teacher observed the student using and (4) The patterns in writing samples.

After carefully reading through each child's data I began to compare and contrast the children's data. I took into consideration: (1) whether or not the students' verbalization matched their strategy use (2) common patterns in verbalization and (3) common patterns in strategy use.

The results of this study provide some interesting data. More than half of the students verbalized and used the "sound it out" strategy. All of the students were cognitively aware of the role constructivism plays in spelling. The results support the

idea that these four students are metacognitively aware of spelling strategies that they use when spelling an unknown word.

However, I do need to note that none of the students used memory as a response for a spelling strategy. When observing their use of strategies it appeared as though they used memory when the student would come to a word they were unsure how to spell, pause for a minute, and then write the word quickly. This could suggest that if students are spelling a word using memory, it may be so automatic that they do not cognitively draw upon that strategy.

Chapter 1

Introduction

The strategies that young children use when spelling an unknown word are quite varied. Whether it is using a personal dictionary, using the word wall, or looking back in a piece they have written the children are finding different strategies. Every day when I work with the children at my literacy internship during writing workshop, I notice that many of them are automatically using these many different strategies to spell an unknown word.

The teacher and the environment support each child's spelling development. The students keep a writing folder. In this folder, they keep all of their work in progress and past writing pieces as well as a writing dictionary. The dictionary is a small booklet that has a different letter on each page. At the top of the page, there are a few sight words and on the remainder of the page there are blank lines. These lines are for the children to write down any word that they feel should go in their personal dictionary. The teacher also keeps a word wall. This is a large portion of the wall in which she has the alphabet divided up into categories by each letter of the alphabet. The letters are arranged in alphabetic order, and there are high frequency words taped up in the appropriate spot. The teacher has created a print rich environment. It will be interesting to see if they students are aware of and using this print rich environment.

Problem Statement

In my study I will be exploring how children verbalize their spelling strategies in comparison to the strategies that they actually use. As I watch these children, I

wonder if they are aware of all the different strategies they use to spell words. The teacher I work with is always stressing that the students should say the word slowly twice when trying to spell an unknown word. Because letters in the English language sometimes have sounds that correspond with the letters in the word, sounding out might work. However, because of the complexity of the language this is not always the case. Therefore, teachers should help the children become aware of other strategies that they can use.

Cunningham explores the use of phonics in the classroom today as compared to when her research first appeared in 1991. Cunningham (2005) states:

When this book first appeared in 1991, very few reading gurus-my best friends included-gave it much of a chance. Phonics was not something you talked about, and most people believed (or pretended to believe) that teachers had stopped doing it...Underemphasized in 1991, it now dominates the curriculum in many schools. I think of the old Beatles' song, "All You Need is Love!" When people talk about teaching children to read, they are often saying, "All you need is phonics!" Phonics is an important part of any balanced reading program-but it is only one part.

Cunningham talks about the importance of recognizing that teaching should not be done at one extreme or the other. She supports differentiation in instruction. Children learn differently, and therefore in order to reach each child in the class, teachers need to provide a variety of instruction.

Significance of the Problem

If teachers are aware of the strategies that students are using when spelling an unknown word, they can help make the child metacognitively aware of the strategies they are using. By doing so, the teacher increases the child's ability to draw upon a

strategy when spelling an unknown word. This is significant because it will decrease the child's frustration when they come to a word they do not know how to spell.

Encountering less frustration when writing will increase their motivation to write and enhance learning as well.

My study will have an impact on my instruction in my placement and in my future classroom. I will be able to take what I learn about students and help them to become aware of the strategies that can be used to spell an unknown word.

My study will also have an impact on teachers. Sharing my findings with teachers can help them become aware of different strategies that children are using. After educators gain and implement this information my study may also make an impact on the students.

Educators can reinforce the different strategies and help the children become aware of which strategy works for them. Not all strategies work for the same child. Students need to be educated on different strategies. They need to be flexible and be able to use a variety of strategies depending upon the task at hand. If the child is aware of what strategy works for them, they may be able to use this strategy first when spelling an unknown word.

Rationale

I became interested in this study because of my observations of students during writing workshop. I push-in to a classroom and assist the teacher in any way I can. When the children come to a spelling that they are unsure of, many times they have asked me how to spell it. As a teacher, I do not give out the spelling, but prompt

them to use their strategies. When I ask them what they can do to figure it out, I get the answer sound-it-out most of the time. I have noticed that there are many more strategies of which they are unaware that they are actually using. For example, I noticed that they use their dictionaries and word walls. However, I was surprised that whenever I ask a child how to figure out how to spell an unknown word they don't usually refer to the word wall or dictionary right away. Many times the students responded that they would sound it out first.

During their writing workshop, the students are writing based on their free choice of a topic. Robert Politzer (1951) suggests, "We all know from our experiences as teachers and students that the interest of the learner is an essential condition for the progress in any subject" (p. 314). I strongly agree with this statement. My beliefs lead to my interest in conducting my study during free writing time, the students will be more motivated to want to learn about the strategies that they can use and also the ones that they are using. It's amazing how the students' use of strategies aligned with the strategies that are found in research.

Definition of terms

Writing workshop - the time of day that I will be conducting the study. It is a certain amount of time, in this case half an hour, set-aside during the class day for writing. Usually at the beginning of writing workshop there is a mini-lesson. The mini-lesson is a short 5-10 minute lesson on a certain writing strategy (i.e. punctuation, adding details, beginning, middle and end, etc.). After this the students return to their seats

and begin independent writing. The teacher conducts individual conferences as the other students are writing.

Personal dictionary- is one strategy that kids can use for spelling an unknown word. It is a small booklet that includes some high frequency words, and has lines on each page for the children to record any words that they learned how to spell, or would just like to add. It gives them their own collection of words that they can keep at their desk to quickly refer to.

High frequency words- words that we encounter most often in texts that we read. These consist of words such as “the”, “a”, “and”, etc. They are also called sight words because they are words that we should be able to identify automatically upon reading.

Anecdotal notes- small, informal notes that I make during the study as I observe the children and their emergent literacy behaviors.

Emergent literacy- the earliest phases of literacy development. The time period that is considered emergent literacy is from birth until the time that children learn to read and write conventionally.

Emergent literacy behaviors- the stages and actions that the children take during their development. These include using invented spelling, picture clues, phonics, etc.

Invented spelling- when children improvise spelling for words unknown. In some cases one letter can represent an entire syllable.

Phonics- Ganske (2000) states, “Different people use this term in different ways. Typically, it refers to instructional practices for teaching beginning readers sound-symbol relationships” (p. 328).

Phonological awareness- ability to identify and manipulate individual speech sounds as well as syllables and whole words

Word wall- a strategy that the children can use to spell. It is a separate part of a wall in the classroom that contains high frequency words, words the class is working on, or any other word the teacher chooses. There are usually cards with the words written on them, so that when the children are writing they can refer up to it.

Environmental Print- also a way that children can spell a word. Environmental print is any form of print that is found in the environment around them. Some examples of this are posters with words, signs and logos.

Chapter 2: Literature Review

Constructivism

The belief of spelling development through “memorizing” is being questioned. Constructivism now has a huge impact on how educators look children’s development of spelling. Davydov & Kerr (1995) explain, “Developmental upbringing and teaching deals with the entire child, the child’s entire activity, which reproduces in the individual socially created needs, capabilities, knowledge and way of behavior” (p. 19). This constructivist approach takes into consideration how the student uses a variety of prompts and environmental factors when spelling.

The Orthography of Spelling

Pinnell and Fountas (1998) describe orthography as the spelling system of our language. In the orthography of the language there are patterns as well as letter-sound correspondence (Pinnell and Fountas, 1998). These patterns include chunks of words

such as blends, prefixes, suffixes, inflectional endings, etc. Bear, Invernizzi, Templeton and Johnston (2004) break up the English language orthography into three layers. They describe the original or first layer of the spelling system as alphabetic. This layer represents the letter-sound relationship when spelling words. Most people refer to the alphabetic layer when thinking about spelling. This idea is daunting for early learners. In Bear, Invernizzi, Templeton and Johnstons' their model of the English spelling system the second layer is when we search for common letter patterns and use them to guide us in decoding unknown words. The third or last layer is the meaning layer of information. When students are able to add meaning when encountering unknown words (such as prefixes or suffixes) they are more likely to be successful (Bear et. al., 2004). Both of these researchers' information describe the importance of looking beyond the "sound-it-out" strategy. The importance of looking beyond that strategy is to help students become successful spellers.

Throughout their spelling development, all children may not use the same strategy. Kwong and Varnhagen (2005) explain that one child may spell a new word by sounding it out. These children segment the word using the phonemes and choosing letters that have the closest sounding phoneme. Another child's spelling strategy may involve using an analogy to a known word or word part. These children do this to ease the cognitive load of conducting a complete segmentation of constructing a whole word. The children use different strategies, but they both may be successful (or unsuccessful). When they are unsuccessful they need to be flexible by drawing upon other strategies that they are aware of. By using the strategy that works

for them, it may save children time and effort when spelling an unknown word (Kwong and Varnhagen, 2005). Kwong and Varnhagen stress the importance of remembering that children who use different strategies are not necessarily at a different level of development. Each child is unique and it is important to understand that they will use different techniques when spelling. This is relevant for teachers to remember when teaching spelling strategies. Teachers need to cover a variety of strategies to best aim their instruction toward all students.

Developmental Spelling Levels

Cunningham (2005) states it perfectly, “Just as children from literacy oriented homes read before they can read by pretend reading a memorized book, they write before they can write!” (p. 12). Manning and Underbakke (2005) include “scribbles” as the first level of children’s literacy development. When children are able to pick up a pencil or crayon and make marks on the paper they are beginning to explore print. It also develops their skills of handling and controlling a pencil when writing. Manning and Underbakke (2005) break children’s spelling abilities into levels. These consist of:

Level 0: At this level, children draw pictures or scribble, and they do not make letter-like forms.

Level I: Children write strings of letters that have no set length. The string may run across the entire page.

Level II: Children still write in strings, but the strings generally range from three to nine letters. No letter-sound correspondence yet exists.

Level III: Children begin to write using invented spelling that can be read. They primarily use consonants and letter name vowels. This is also referred to as the consonantal level.

Level IV: Children make all letter-sound correspondences, using almost all consonants and most vowels. Some vowel confusion still exists.

Level V: Children conventionally spell almost all words that are age appropriate (pg. 236).

The children I will be studying are in first grade. First graders are typically in levels III-V. At the Level III, children use invented spelling. Cunningham (2005) describes the importance of invented spelling, “In addition to lots of reading, writing helps children become better decoders and spellers. This is especially true when young children are encouraged to invent-spell the words they need but haven’t learned to spell” (pg. 58). It is important that children are given the opportunity to explore unknown words. Through constructivism children can interact with their environment and their peers in order to increase their vocabulary.

Children use spelling strategies when using invented spelling. One strategy that Pinnell and Fountas (1998) focus on during the invented spelling stage of development is the letter-sound correspondence. When children say the words slowly and listen to the sounds, they begin to develop this strategy. As their letter-sound correspondence develops, they are able to conventionally spell words that have regular correspondence (such as *got* or *can*). By having the opportunity to invent spelling, they can also come increasingly close to spelling words without regular correspondence (Pinnell and Fountas, 1998).

Sue Weiner (1994) describes her understanding of childrens' writing development levels as:

Despite the variation in stage enumeration and description, developmental theorists believe that students move through a series of linguistically hierarchal stages in which students eventually manipulate (1) symbols without sound/symbol correspondence, (2)

symbols with sound correspondence, (3) within-word letter patterns and (4) across-word meaning patterns. The ultimate stage in spelling development is presumed to be standard or accurate spelling (p. 316).

Her description of the levels is similar in some ways and different in other ways from Manning and Underbakke's levels. They both have the same belief that the first stage of children's development involves drawing scribbles or symbols with no sound correspondence. Manning and Underbakke's (2005) model breaks down children's writing in strings of letters with no length and then new level for children writing strings of three to nine letters. Weiner does not specifically address the strings of letters in her levels. They both include a level for development of letter-sound correspondence.

It can be understood that they both believe this is a significant aspect of children's spelling development. After this Manning and Underbakke (2005) include the consonantal level. Then, the next level includes consonants and vowels, whereas Weiner (1994) does not. The next level she describes is within-word letter patterns, and the level after this is an across-word meaning pattern. However, they both describe the last level as involving conventional spelling. I would say that it is not described as correct spelling, because it is not a fact to say that everyone spells each word correct. Even adults have trouble spelling some unknown words.

By comparing two different point of views, it is safe to say that the similarities that they have give an understanding of the most important stages in children's spelling development. Being aware of these similarities and stages in children's development helps teachers in their instruction. Johnston (1999) describes,

“Knowledge the teacher gains from information on writing stages will help individualize each child’s writing program” (p. 22). Keeping these levels in mind will help me in my study. It will help in understanding the first grader’s spelling development by looking at students individually. I. With this knowledge, when working with students, I can reinforce the strategies that have been working for them.

Phonological Awareness

In schools I often hear teachers instruct students to “sound it out”. I am guilty of this myself. Therefore, I find it necessary to consider and research the “sound it out” strategy. Hauerwas and Walker (2004) suggest that, “Children need to integrate their developing understanding of letter-sound correspondence with knowledge of morphological and orthographic patterns to spell and write effectively” (p. 168). They remind us that while it is okay to use this strategy it is necessary to incorporate other ones as well.

Pinnell and Fountas (1998) describe, “Being phonologically aware means becoming sensitive to the sounds of the language” (p. 76). This includes the idea of letter-sound relationships in Manning and Underbakke’s (2005) levels III-V. In Weiner’s (1994) model the phonological awareness begins in level two and continues through all of the levels. When it comes to the orthography of English language, this develops in the alphabetic layer (Bear et. al., 2004). The awareness of sounds in the English language becomes more automatic when we reach conventional spelling.

Cunningham (2005) describes that, “Phonological awareness includes the ability to separate sentences into words and words into syllables (p. 26). Pinnell &

Fountas (1998) describe one way that helps in children's development of this strategy. They explain that it is important to teach and allow students to speak words slowly. Their reasoning for this is that it helps children connect letters to sounds by using the movements of their mouth (Fountas & Pinnell, 1998).

In my research I will be studying the usage of this strategy by watching children. Watching their mouths and hearing them is going to help me be aware of when students are using this strategy.

Phonemic Awareness

Phonemic awareness is very similar to phonological awareness. Cunningham (2005) describes, "Phonemic awareness includes the ability to recognize that words are made up of discrete sounds and to manipulate sounds" (p. 26).

Before students develop phonemic awareness, they are at the prephonemic stage of their development. Rasinski and Padak (2001) explain that at this level, children understand how letters are formed but not how they work. My study involves children in the first grade. Children in this grade, for the most part, are at the phonemic awareness stage. In particular, the children I am focusing in on have phonemic awareness.

Invented spelling plays a huge part of phonemic awareness as well. It is important that students are encouraged and given the opportunity to invent-spell. Being involved early on in their development allows them to develop early as well as a strong sense of phonemic awareness (Cunningham, 2005).

Rasinski and Padak (2001) explain that using their knowledge of oral language help children discover that words are also units of written language. Children can use their mouth to manipulate the sounds when spelling an unknown word. When saying the *th* chunk notice how your tongue sticks out a little bit. Another example, is saying the *o* sound. When making this sound, the mouth turns into an *o* shape. This is one way that children can use the phonemic awareness strategy. Fountas and Pinnell (2001) confirm that, “Phonemic strategies are basic toward word solving in both writing and reading” (p. 370). If children are using this strategy, it will be interesting to see if they are aware of the use of oral language when spelling an unknown word.

Word Patterns

Now I will explore the second layer of the English orthographic system according to Bear et. al. (2004). Templeton & Morris (1999) offer a reason for the development of second layer:

English spelling did start out as primarily an alphabetic or phonemic writing system writing system, representing sounds in a fairly straightforward left-to-right match up. It still has a strong alphabetic foundation as illustrated by words such as *mat* and *stop*. However, as a succession of languages brought an influx of new vocabulary into English over the centuries-Germanic, Scandinavian, French Latin, Greek and Spanish-the way these words were spelled in the original language was usually brought in as well (p. 104).

They describe the importance of foreign languages in the development of the English language. English has become more diverse. Due to this, the English language has also moved away from just an alphabetic system (Templeton & Morris, 1999).

Morphemes are also included in word patterns. Cunningham (2005) states, “Linguists, who study how language words tell us that in English, morphemes are the keys to unlocking the pronunciation, spelling and meaning for big word” (p. 126). Fountas and Pinnell (2001) describe, “A morpheme is the smallest unit of meaning” (p. 371).

There are different types for morphemes. Some morphemes can be combined to make compound words. Prefixes and suffixes are a morpheme. Inflectional endings (such as -ed and -ing) are also morphemes (Fountas and Pinnell, 2001). When children understand how each ending is spelled, they can use this as a strategy when spelling an unknown word. They can draw up their previous experience with these endings when using them again.

Word families are also word patterns. Ganske (2000) states:

Word families are groups of words that share a common rime. Because the words *flap*, *cap*, *snap* and *strap* all have the *ap* rime, they are part of the *ap* word family. Rimes like *ap* that are found in many words are known as phonograms (p.120).

Ganske (2000) also describes another word pattern that goes along with onsets and rimes, “Blends are consonant units made up of two-letter or three-letter sequences” (p. 118). Blends include letters such as *bl* in *blue*. Word families or blends are another strategy for spelling an unknown word. When students are struggling on an unknown word, they may refer to one of these word families or blends based on what they already know about them. Children may also refer to the blends or word families through using known words to decode an unknown word.

Understanding vowel patterns is also important when spelling an unknown word. Pinnell & Fountas (1998) explain, “There are many vowel patterns such as *oo* in *look* or *moon*; *ow* in *snow* and *cow*; *ei* in *eight* or *ceiling*; *ea* in *bread* or *meat*; *ee* in *feel*; *oa* in *boat*; *ay* in *day*; *ie* in *pie* and *receive*” (p. 94). When I work with first graders I know they are taught some of these strategies. For some of the strategies they are taught sayings or “rules” to remember them. One is the “screaming *ee*’s”. The students are taught that when two *ee*’s are put together they “scream”. Another rule I have noticed is “when two vowels go walking the first one does the talking”. This is a rule that describes to the children that when two vowels are together only the first one is heard. The *ow* rule that I hear in classrooms is described as “the *o* pinches the *w* and says *ow!*” Not all of them are taught to students in the first grade yet. The strategies that I have noticed aren’t taught in the classroom I am in are the *ei* and the *ie* rules.

All of these are also strategies that children use when spelling an unknown word. When children are writing they may use these word patterns that they already know. Some children use the morphemes, word families and blends that they know are familiar with to spell an unknown word. This is also referred to “chunking”. This is taking apart words and using “chunks” that are known to decode them. However, it is important, to keep in mind that the same strategy may not be effective for all children. Fountas and Pinnell (2001) explain, “Efficient readers and writers use the visual patterns that make up words. The letters in *freight* for example, would make a strange-sounding word indeed if they were ‘sounded out’ individually” (p. 371). This

statement supports the idea that children need to incorporate these word patterns as well as the phonological and phonemic strategies.

Constructivist Approach to Spelling

Rasinski and Padak (2001) recommend incorporating as much functional print as possible in the classroom. They support the idea if the children see and use these words that they become more automatic to them. Teachers need to develop a print-rich environment. A print rich environment includes having different opportunities to interact with and use words. These include different resources.

Dahl & Barto (2003) explain that children use resources such as dictionaries, personal word lists, word walls, classroom references, handouts, computer spell checks and other people. In the classroom that I work in the children are have all of these resources except computer spell check available to them. The children do not use the computer during their writing time.

Each child in the class has a personalized spelling dictionary in their writing folder. Kelly Chandler (2000) describes, "By keeping a short alphabetized list of words they have struggled to spell, kids create their own quick, personalized reference for writing" (p. 93). It is important that it is alphabetized so that when a child is writing they don't have to spend the time flipping through every page. If they had to do this, it might interrupt their train of thought. As Chandler explained, it is important that children have the opportunity to fill in their own words. This personalizes the dictionary. The importance of personalizing the dictionary is that it becomes more useful for them, as well as establishing a purpose for them to use it.

Not only does it act as a reference for children, it also makes their writing materials more personal. Feeling an ownership of their writing materials encourages children to write.

A word wall is also an important resource to have available for children. High-frequency words must be on the word wall. Cunningham (2005) explains, “Children who write without a high-frequency word wall may write “thay, sed, frum” thousands of times and they will become automatic at spelling these words incorrectly” (58). She supports including the high-frequency words on a word wall. She brings up a good point, that spelling these words incorrectly over and over can make unconventional spelling more automatic for them. It is harder to break a habit that has already begun. These words are important to be included on the wall right from the beginning. High frequency words are words that children will encounter in most of their writing and reading, if not all.

Not only the high-frequency words must be spelled correctly. All the words on the word wall should be. When a source is available for children, it needs to be reliable. All children should be aware of the word wall, and some may depend on it, when encountering an unknown word. If the child writes the word repeatedly incorrectly it becomes automatic (Cunningham, 1998).

As Dahl and Barto (2003) explain, the children also need to be able to use handouts and people as resources. The students I will be observing get a list of words every month to keep in their writing folder. The list contains words that relate to the

month. For example, the word *Valentine* would be on a February list and leprechaun for March.

The students are also able to talk during their writing workshop time. It is important to allow some conversation during this time. This relates to Vygotsky's theory of social constructivism. Children learn from each other. In my study, the students are exposed to learning an unknown word through social constructivism. Other students are a significant resource during writing time. An unknown word to one child may be a known word to another.

Other than using sounds, there are also these uses of resources. They are just as important to have available. It will be interesting to see if students are aware of these resources that are available to help spell them use a word.

Writing Workshop

I will be conducting my research during the writing workshop time in the classroom. Fountas and Pinnell (2001) describe, "The purpose of the writing workshop is to give students opportunities to write within the school day and to provide appropriate, intensive, targeted instruction to the whole group, small groups and individuals" (p. 50). Through my study I will look deeper into the strategies that students use to spell. After the student's strengths are understood by the teacher they can help the students become aware of the strategies that they are using and what works for them.

Pinnell & Fountas (1998) also state that, "writing workshop, interactive writing and independent writing are all contexts that help children learn how to make

the connection between the phonology and orthography of language” (p. 77). During this time they are able to explore the different layers of orthography. Without the opportunities they cannot encounter the challenges to spell unknown words. Writing workshop gives them this opportunity. Pinnell and Fountas (2001) also address the importance of allowing students interactive and independent work time. Interactive work time, allows the students to discuss and brainstorm ways together that they can write. Again, this relates to Vygotsky’s theory of social constructivism. Talking with other students and their teacher gives them the opportunities to hear different viewpoints and strategies. Allowing them time to work independently gives them the opportunity to practice these strategies and discover what works for them. My study is to explore whether or not, the students being observed, are actually able to verbalize the strategies that they use.

Chapter 3: Methodology

Objectives

The objective of my study is to explore how children verbalize their strategies in comparison to the spelling strategies that they actually demonstrate when writing. Understanding what strategies students are aware of, and observing what students are really doing can help teachers increase their awareness of the strategies that students are actually using. This is important in the foundation of building successful writers. A goal of mine in this study is to note whether or not the children are being flexible with their use of spelling strategies. If one strategy does not work the student needs to be able to draw upon other strategies. The question is, do

students draw upon the same strategy for every word, or do they use different strategies based on what the word is?

Participants

Four students in the same first grade class participated in this study. The class was chosen due to the fact that I work alongside the teacher during the students' writing time. I have been in the classroom for the whole school year as a literacy intern. The students were chosen for these three reasons: (1) Through my observations of the students with different writing abilities during writing time (2) Based on teachers recommendations of students with different writing abilities and (3) Whether or not they were poor or good spellers (in terms of spelling accuracy), I was looking for students with different abilities to participate in my study.

One of the four children is Stephanie. She is one of eight children. In first grade she moved to Caledonia-Mumford from a Catholic school in Chili. She did not come with a lot of background history in literacy. Her highest grades were gained through memorizing prayers. Stephanie's family is a great support in her education. Her mom comes in and helps the classroom teacher when needed, and works with Stephanie at home. Stephanie received Academic Intervention Services until the first week of my study. She does not receive the services anymore. She struggled with spelling in the beginning of the year. She has developed in her spelling ability.

The second child I observed was Tara. She is a student that is an exceptional writer and speller. She has one older sibling who is in eighth grade. Tara's classroom teacher had her sibling when she was in first grade. Tara's dad is a teacher and mom

is a businesswoman. She comes from a high-class background and has had rich, educational experiences, such as visiting museums. Her family is also very supportive of her education. Kara's present teacher was also her kindergarten teacher. She is an exceptional student who is well above grade level.

The third child is Brian. He is the third of four children in his family. Brian's family is very close to each other. His aunt and uncle are both on the school board. His family is middle-class and his parents are dairy farmers. The family does a lot for community, such as providing their farm as a place for a field trip for kindergartners. According to his classroom teacher, he was an average writer when he started first grade and now he is writing above average. Brian's present classroom teacher was also his kindergarten teacher.

The last student I observed was Frank. Frank is one of two children. He has a younger sister. Both Frank and his sister are bright children. His family is a middle-class family. Mom does not have steady employment outside of the home. Dad is able to support the family. His family is also very supportive of his education. Frank is read to a lot at home. He can become active and occasionally lose focus because he is too far ahead. Brian was in Frank and Tara's kindergarten class with their present teacher. She looped with these three students. The children are all in the same first grade classroom. Their classroom consists of twenty students and is in a rural setting in western New York. The elementary school consists of Kindergarten through fifth grade. It is a small school of about 900 students and is connected to the high school.

The teacher is a female who has been teaching for fifteen years. Therefore, she has great insight into the development of children. The teacher has created an educational-rich environment. There are posters, materials, stories, and children's work all around the classroom.

Measures

Observation

I measured the strategies that these four students use. I did this through my observations of the students when they are decoding an unknown word. During the time observing the student, the strategies that they were using were written down. If they use the same strategy more than once, it was noted. Observations were systematic and consistent. The children were observed for a 30-minute time period. This was during their independent writing time. Writing workshop was in the morning between 8:45 until 9:15. Observing the children for the same amount of time during their writing workshop increased the reliability of my data. I focused on one child per day so as not to confuse my observations. Another way I increased the validity was if the child asked how to spell a word I did not prompt them. If I did, the child may rely on the strategy that I suggested and that would affect my data.

I also measured the teacher's awareness of the strategies that each student used I did this through an interview with the teacher. The questions can be found below in the procedures. I did this to make my research more valid. I wanted to see if her observations matched my own.

Interview

I measured how students' verbalize the spelling strategies that they use. As an assessment tool to measure the students' awareness, I conducted an informal interview. The interview consisted of three questions. Each child was asked the same questions. This increased the reliability of the study. The first question was developed in order to find out what strategies they were cognitively aware of. The question was, "When you are writing and don't know how to spell a word, how do you figure out how to spell it?" The second question prompted the students to think deeper and think about what other strategies that they use. This question was, "What if that doesn't work? Then what do you do?" This question was added to measure whether or not the students are knowledgeable of other strategies that they may draw upon if their initial response does not work. The third question was, "Are there any other ways you can think of right now?"

Procedure

In preparation for the study I completed a questionnaire for the students. The students' questionnaire included three questions: (1) When you are writing and don't know how to spell a word, how do you figure out how to spell it? (2) What if that doesn't work? Then what do you do? (3) Are there any other ways you can think of right now?

I also created a questionnaire for the teacher. The questions were:

- (1) What strategies do you notice your students using when trying to figure out how to spell an unknown word?

- (2) How do the strategies the struggling students use compare to the strategies that the grade level students use?
- (3) Do you notice any growth or changes in the strategies that they use?
- (4) Do you ever give them the spelling of a word if they ask you to?
- (5) If yes, how do you determine which words to give them the spelling of?
- (6) What strategies do you teach the children to use when they need to spell an unknown word?
- (7) What strategies that you teach do you notice the students using?

I began my study by interviewing the students. The questions were only asked on the first day of the study. I chose the student that I wanted to work with the first day randomly. I sat down next to the student as soon as they began independent writing. I wrote their name and the date on the questionnaire. I asked them question number one directly as it was written. Then I recorded their answer. Then I asked them question two and recorded their answers. Question number three was only asked if the student was struggling with number two. It was developed because it is worded differently than number two.

After the student answered the questions on the first day I began observing the strategies that they were using. I opened up my journal and put their name and date at the top of the page. I recorded any strategies that they used during independent writing. While sitting next to them, I did not prompt the students. If they asked for help, I told them to think about what they could do. I recorded their answer and the strategy that they actually used in my journal of data.

For the first week of the study, I randomly chose the student to observe on Tuesday, Wednesday and Thursday. I did not conduct any part of the study on Fridays because I am not in the classroom.

During week two I continued observing and recording the children's strategies that they were using in my journal. Before I began my data I recorded the child's name at date at the top of the page where I would be recording my observations that day. I observed the students in the same order that I conducted the informal interview. I positioned myself right next to the student for two reasons. One was because that was how I had been working with them all year. The second reason was because I was able to observe their writing behaviors and writing samples more closely.

I observed the students for four weeks. This time frame was chosen based on the amount of time I had to work with the children. I also felt I would be able to collect an adequate amount of data in four weeks.

After this I made a chart for each student. The responses that they gave were recorded in a column of a chart. There would be a column named "other" as well. Each row at the top of the chart would include the date that the observations were made. For that date I would put an "x" in the row of the strategy that the child used. There would be an "x" marked for each time they used the strategy. If it was not a strategy that was in their response it was marked in the "other" column. An example of this chart can be found in Table 1.

Table 1: Observation Data

Name:	Date:	Date:	Date:	Date:
Verbalized Strategy #1				
Verbalized Strategy #2				
Verbalized Strategy #3				
Other				

After collecting data from the children, I conducted an informal interview with the teacher. I put the name of the child at the top of the classroom teacher questionnaire. I asked the teacher to base her responses on her observations of the child whose name was at the top of the paper. The questions were asked directly as they were written. The teacher answered the questionnaire for each individual child.

Before beginning my data analysis, I collected copies of the children's writing. I photocopied the stories that the students wrote. Samples of written data were only taken from pieces that they wrote during the time frame of the study.

Instructions

Not many instructions were given to the students during my study. Before conducting the interview I asked the students if I could ask them a couple of questions about their writing. After they gave consent I began asking the questions.

After the questions were asked I observed the students. If they had any questions on how to spell a word, I gave them the instruction to think about what they could do and try it themselves.

I asked the classroom teacher for her consent to answer questions. My only instruction to her was to keep the response based on the child whose name appeared at the top of the questionnaire.

Data Analysis

First I analyzed the data of each individual child. When analyzing the data I took into consideration: (1) The strategies that the student verbalized they were using (2) The strategies I observed the student using (3) The strategies that the teacher observed the student using and (4) The patterns in writing samples.

After carefully reading through each child's data I began to compare and contrast the children's data. I took into consideration: (1) whether or not the students' verbalization matched their strategy use (2) common patterns in verbalization and (3) common patterns in strategy use.

Using qualitative data enhances a researcher's ability to take a deeper look into the students' use of strategies. I used the triangulation of the data from the student interview, observations, teacher's questionnaire and the children's writing

samples. A student interview was conducted in order to gain information on students' cognitive awareness of spelling strategies. By recording my observations I qualitatively collected data, which enabled me to provide a rich description of the students' use of strategies. The teacher's questionnaire was a way to compare my observations to their classroom teacher's observation. This helped determine whether or not my data was consistent. Collecting students' writing samples provided documentation of qualitative data.

Chapter 4: Results

My purpose of this study was to compare children's verbalizations of the spelling strategies that they use in comparison to the strategies that they actually use. After interviewing the four children I observed them and wrote down any significant observations that I made. The observations I recorded included the spelling strategies that they used. Then I interviewed the teacher, asking her questions about the children's educational background and the spelling strategies that she observes them using. The data is presented case by case in order to look deeper into each of these four children. For each child the interview answers, observation data, and answers from the teacher are presented.

Stephanie

Stephanie was student number one that I interviewed and observed. When I interviewed Stephanie she was sitting at a rectangular table pushed up against the word wall with five other students. I asked Stephanie the first question, "When you are writing and don't know how to spell a word, how do you figure out how to spell

it?" She hesitated and scanned the room. Then she pointed up to the word wall and said, "Look up there." After that I asked her, "What if that doesn't work? Then, what do you do?" She hesitated again and then answered, "Sound it out." When I asked her question number three, "Are there any other ways you can think of right now?" She responded, "No," quickly.

I found many interesting results when observing Stephanie. Only one out of the four days that I observed her, did I notice her using the word wall. However, this one time that she did use the word wall she was prompted by another student to look up there. Therefore, she did not use the word wall as an independent spelling strategy when she needed to spell an unknown word. When it came to the "sound it out" strategy, I observed Emily using this strategy 100% percent of the time that I collected data. Some of her examples from her writing include: *hte* for *hot* and *a bot* for *about*. I also noticed Emily using the "silent e rule." This was not a strategy that she verbalized to me. I observed her using "the silent e rule" about 75% of the time, or three out of the four days. Her spelling of *hot* and also how she spelled *fun* as *fune* are examples of her using this strategy when writing. This shows that the rule is in her schema. However, she is over generalizing and not always correctly deciding when to use the silent e.

When talking to the teacher about the strategies she has observed Stephanie using, our observations were common. Stephanie's teacher and I have both noticed that Stephanie is not taking many risks with her writing. The words that she has written are for the most part known words, or words that she has already written

many times. This prevents her from needing to rely upon strategies to decode an unknown word as often. Stephanie's teacher also agrees that Stephanie relies heavily on the "sound it out" strategy when spelling an unknown word. She explained to me how Stephanie also relies on her phonics skills when reading as well. This observation by the teacher is supported by Stephanie's incorrect use of the phonics rule about "silent e".

Frank

Frank is the second student that I interviewed then observed. When I asked Frank the first question, "When you are writing and don't know how to spell a word, how do you figure out how to spell it?" he responded confidently and promptly with, "I sound it out!" When I asked him the second question, "What if that doesn't work? Then what do you do?" he paused a minute then answered. He said, "Look around and if the words up there you can copy." When asked what he meant by if the word is up there, he explained that he pointed to the word wall and other environmental print around the classroom. Then I asked him, "Are there any other ways you can think of right now?" He quickly responded, "No."

When I observed Frank, I noticed that he did sound out words, but he did not use the word wall. Three out of the four days or 75% of the time that I observed Frank he did sound it out. When he was writing he spoke the word as he wrote. He did this for words he knew how to spell and words he needed to decode. The difference was that when he came to a word he needed to decode, he slowed down his speech and slowly pronounced the word as he wrote it down. In some cases he

would say the word twice in order to figure out how to spell it. For example, one day he was writing and came to the word *with*. He said it one time to emphasize the blend. He wrote down the *wi*, said it again, and then wrote down the *th*. After he slowed down to decode an unknown word, he was able to quickly get back in his writing. He continued to write words as if they were automatic when spelling until he came to a word he was unsure of again. A strategy that I observed Frank using that he did not verbalize when interviewed was his use of the classroom dictionary. He only used this strategy one out of the four days I observed him, or 25% of the time. However, it is important to note that he did not use this strategy as the first attempt to spell the unknown word. He wrote the word *horse* fast, as if it was a known word, spelling it as *hourse*. He stopped writing, looked up at me, and told me that it was not right. Then he proceeded to go get a dictionary and look it up. He was successful looking it up on his own. He corrected the spelling and continued his writing. Frank was using the strategy of visualizing to determine that this was not the correct spelling of the word. He knew that *hourse* did not look right. Visualization is a strategy that Frank did not verbalize.

When talking to Frank's classroom teacher I found one of her observations to be interesting. She referred to Frank as a "scrounge" and told me that she believed he was very good at using what was around him to help him spell an unknown word. My observations do align with hers in the sense that he used the dictionary, but they do not when it comes to other environmental print. This could be due to the fact that I only observed Frank for four days. However, she did also tell me that she noticed he

is becoming a good conventional speller. This was similar to my own observations of Frank's spelling as he was writing.

Tara

Student number three that I interviewed and observed was Tara. I asked Tara the first question, "When you are writing and don't know how to spell a word, how do you figure out how to spell it?" She responded, "I sound it out." Then I asked her, "What if that doesn't work? Then, what do you do?" She hesitated for a while and responded, "Then I go ask someone." I finished the interview by asking, "Are there any other ways you can think of right now?" She quickly responded, "No."

During the collection of my data, I only observed Tara using the verbalized strategy of sounding it out. Out of these four days she did not ask anyone how to spell any words that she was unsure of. Tara was spelling many words as if they were conventional. For example, she wrote the word *exhibit* as *egg' zibit*. Her spelling of *exhibit* is just one word that demonstrates her use of letter-sound correspondence and her use of known words. She knew the conventional spelling for *egg* and inserted this spelling for *ex* because that is how it is how she pronounced the beginning portion of the word. She also spelled *spagetti* for *spaghetti* and *pattys* for *patties*. In *spaghetti*, she was using her memory of the conventional spelling but missed the letter *h*, which is usually not heard when pronounced. In *patties*, she has not fully assimilated the rule about changing *y* to *i* and adding *es*. She simply adds the *s* to the end of *patty*. I also noticed that a majority of the time when Tara was spelling an unknown word she wrote it automatically. She didn't stop to ponder the spelling or revise the spelling. A

strategy that I observed Tara using that she did not verbalize was looking back in previous writing to find if she has written the word before. One example I observed was when the teacher wrote the word *options* in Tara's table of contents for a story. Tara was writing the same story and came to the word *options* again. She did not remember how to spell it, so she looked back to the table of contents and copied down the correct spelling from there. Kara came to the word again in the same story and this time she was able to correctly spell it on her own, without looking.

Tara's teacher describes her as a very conventional first grade speller. When I asked Tara's teacher about the strategies that she notices Tara using to spell an unknown word she said, "When she spells words, she can take, for example "tion" to make and break using words she knows, often doubles consonants, and because she is a good reader this leads to her writing." To sum it up, Tara's teacher has observed her using chunks that she knows and rules that she knows as well as the strategies that I have observed.

Brian

Brian was the last student that I interviewed then observed. The first question I asked him was, "When you are writing and don't know how to spell a word, how do you figure out how to spell it?" He responded, "I look in my dictionary." Then I asked him, "What if that doesn't work? Then, what do you do?" He said, "I try to sound it out." When I asked for more ideas, "Are there any other ways you can think of right now?" he said, "No."

When I observed Brian I noticed that he did use both of these strategies, and others as well. I observed Brian speak very slowly as he wrote all four days. He relied heavily on sounds when spelling an unknown word. For example, he wrote *shre* for *sure* and *drte* for *dirt*. Both of these words demonstrate his use of letter-sound correspondence when spelling an unknown word. His spelling of the word *drte* is also just one example of another strategy I observed him using. I observed him overgeneralizing the use of the “silent e rule”. He did not verbalize that he uses rules to help him spell, but I did observe him using the rule, although incorrectly.

Two out of the four days or 50% of the time that I observed him he used a dictionary. It is interesting to note that one of these days, this was not the first strategy that he relied on when spelling the unknown word. He first wrote *hide* as *iyd*. He spelled it this way, by pronouncing it slowly twice to sound it out. Then he looked at it for a moment, and went over and got a dictionary. This shows that he knew it just did not look right. Visualizing is a strategy that Dillon used, but did not verbalize. Another strategy that I observed him using that he did not verbalize is looking back in what he had already written. One time out of the four days, he looked back in the same story that he was writing to copy a word that he already had written in there. I did not observe him spelling the word the first time. Therefore, I cannot say what strategy Brian used when spelling the word the first time.

When talking to Brian’s teacher, she described him as a writer that is not a “risk-taker”. She used this example to describe him: if Brian was writing and came to a part where he could use the words *adventure* or *trip*, he would use the word *trip*

because it would be easier for him to decode. His classroom teacher went on to explain that she has observed him being the most successful when he relies on making and breaking words in the same word family. For example, he would be able to change the word *map* to *clap* by replacing the *cl* for the *m*. After she brought this to my attention, I did notice that my observations align with hers when analyzing the data that I had collected. All of his writing samples that I observed included mostly words that were in his schema, or that he had written before.

Data Analysis

When analyzing the data of the spelling strategies that these four children use to figure out how to spell an unknown word there are some common patterns. It is interesting that all four children answered, “No.” for the last question in the interview. The children did use more strategies than they were able to verbalize. Their answer to this last question may mean that the children are not able to verbalize all of the strategies that they use. They may not be metacognitively aware of their strategies.

All four children did verbalize the sound it out strategy. This strategy is consistent with their use of it as well. It is important to note that this strategy is a strategy that was taught to the students by the teacher. From the time that they began spelling, she told them to say the word twice and stretch it out. I also find it important to state that this is a strategy she taught the students over and over. She told me that whenever they would ask her how to spell a word she would remind them to use this strategy. In this case, all the students are using what they have been taught.

Another verbalized strategy was using the word wall. Only two out of the four children verbalized the use of this strategy. Fifty percent of the four children were aware of the word wall but Stephanie was the only child that actually used it. However, Stephanie only used it when prompted by another student to use it. Therefore, no student used the word wall on an independent basis when spelling a word. This data is interesting because half of the students are consciously aware of the word wall as a spelling strategy (at least through this interview) and the other half isn't, but none of the students used it when needed. Possible factors could be because none of the students sit facing the word wall, or because they are not used to relying upon it.

One out of the four children verbalized the use of a dictionary when spelling an unknown word. When observing the children, I noticed that he and another student used this strategy as well. The students were interviewed on different days, but both of the students who actually used the dictionary were interviewed after the teacher taught the students to use the dictionary when they need to when spelling. The student that verbalized the spelling strategy of using a dictionary was the first student to use one when I observed them. The two students sit at the same table, and the second student could have learned the behavior of using a dictionary to spell an unknown word from the first student.

The last verbalized strategy I received was to go ask someone. I received this answer only once, and it was from the higher than grade level reader and writer. She was even hesitant before providing this answer. She is a very fluent and conventional

writer that it may be hard for her to consciously draw upon the spelling strategies that she uses. I do not think that the other children answered this because their classroom teacher teaches them to not ask someone unless absolutely necessary.

All of the children also used some strategies that they did not verbalize. One of these strategies was using the “silent e rule”. Two out of the four children used this rule. It is interesting that both of them over generalized the rule more than once in their writing. It seems as though they are unsure of where to apply the rule.

Another strategy that half of these students used but didn’t verbalize was looking back in what they have previously written in order to find the spelling of a word. In one case, it was a word that the teacher had helped the student with before, and in the other case it was a word that the student wrote on his own.

The children also used the strategy of visualization to determine whether or not the word was spelled correctly after they had already written the word. Two out of the four children did this and in both cases it helped them both successfully determine that the words were spelled incorrectly. This is one way that these students were using reading and monitoring strategies when spelling.

Chapter 5: Discussion and Conclusion

The question I asked for this study was, “How do students’ verbalize the spelling strategies that they use compare to the spelling strategies that they actually use?” I chose this question based on my previous observations working with children. I predicted that the most prominent strategy verbalized and used would be sounding it

out. My data confirmed my predictions that children rely on this strategy when spelling.

For this particular group of children, one possible explanation for this would be that the teacher has taught them to say the word two times and then stretch it out. She has been teaching them to remember to use this strategy since the beginning of the year.

Another explanation for these results relates back to the layers of the orthography of the English Language. These layers, which were previously discussed in chapter 2, begin with letter-sound correspondent knowledge. All four of the children that I observed are phonetically aware of using sounds as a strategy to spell an unknown word. Therefore, the explanation is that this layer is where the children are or have already been in the English Language development.

Word Wall

The strategy of using the word wall differed greatly for all of these children compared to sounding out a word. Two out of the four students did verbalize that strategy. One of the students did use it only once. However, a student she was sitting next to prompted her. Therefore, none of the students used the word wall as an independent strategy.

A possible explanation for these results is that the students are not taught to use this strategy much. During the year time span that I was in the classroom working with the teacher, I have only seen her go over the word wall words once with the students.

Another possible explanation could be where the children are seated. For the four children that I studied, two of them had their backs facing the word wall at their desks, one sat facing the word wall but on the other side of the room, and the fourth student was at the table facing the word wall, but he did not use it either.

As discussed in chapter two, many words that are on the word wall are sight words that the children use frequently. This study was completed at the end of the year. Therefore, if the words had not been changed on the word wall, depending on the case, the student did not need to use it for the words that they were spelling. However, this could only be an explanation for some cases and not all. For example, when one child needed to spell *sure*, that word could be found on the word wall, but he did not use the word wall when figuring out how to spell it.

Dictionaries

In this study one out of four children verbalized the use of the dictionary, but two out of the four children actually used the dictionary. Like the word wall, the teacher taught them how to use the dictionary. Again, she was only observed teaching the students to use the dictionary one day. However, in my study, the children did use the dictionary more than the word wall.

One possible explanation for this is that she taught them to use the word wall earlier on in the year. The dictionary is a newer concept to the children. Since they had just learned about the dictionary, one reason they may have been observed using it more is because of their curiosity. These dictionaries had pictures and were visually stimulating to them. Another reason could be that looking up the word in the

dictionary posts a challenge for them. When I observed children using them, they were very proud to have found the word once they did. One boy even pointed to the word and exclaimed to me, "Look, I found it!"

Another explanation for two children that did use the dictionary is that they both sit at the same table. The student that verbalized the strategy used the dictionary first. Then, the other student who sits at the same table went to use the dictionary second. So, peers may influence the strategies that students use when spelling.

I think that the placement of the dictionaries in the classroom also played a role. The two students that did use the dictionaries sit at a table that is close to the shelf that houses the dictionaries. The two children that did not use the dictionaries sit on the other side of the room, and the dictionaries are out of sight because the shelf faces the other way.

Asking a peer or teacher

One out of the four students verbalized that she would "go ask someone." She was the higher-level student, and seemed hesitant giving me this answer. In the time that I observed all of the children, I did not observe any of the children using this strategy. The children in this class are taught to try using the strategies that they know before they ask someone. I think that because the students are taught not ask unless absolutely necessary, that may contribute to why this student was hesitant to give this answer.

Another reason I think that she may have hesitated when answering is because of her writing ability. She is a very conventional writer. When observing her, I noticed that she uses her spelling strategies as if automatic.

“Silent E Rule”

A strategy that I observed the children using, but wasn't verbalized, was using phonics rules when spelling an unknown word. The rule that I observed was the “silent e rule” Two out of the four children used the rule multiple times. In some cases it was used correctly, and in some cases it was over generalized for both children.

An explanation for when the students used it correctly, is that it could have been a word that they have seen or written before. The children could have remembered or conventionally written words that use this rule.

Then, when the children went to write a new word, they were applying their knowledge of the “silent e rule”. Due to the fact that this letter is silent, sometimes it is hard to determine whether or not to put it at the end of the word. The children are aware of the rule, and therefore it turns into sort of a guessing game for the student.

This “rule” is one that is taught to these first graders. Teaching the children rules such as this is consistent with the literature review. These children demonstrate their understanding of how the pattern of using the silent e works. Even though they are over generalizing the rule, the students can become familiar with the particular words that they misspelled through editing and reading the words. As they become

more familiar with the standard spelling, the use of the silent e will continue to fall into place, as it has done with the words were correctly spelled.

Visualization

I also think that it is important to add the strategy that I observed two out of the four children using to monitor their spelling of unknown words. After these students wrote a word (that was spelled incorrectly) they looked at it for a couple of minutes and then determined it wasn't spelled correctly. After this, they called upon another strategy to check their spelling. In one case, the student went and got a dictionary to look up his spelling. He wrote down the word correctly. Doing this allowed him to have practice writing the word conventionally. Visualization was an initial strategy used to determine whether a word was misspelled or not.

Implications

One big implication that this data shows is what we teach repeatedly is what children will use. This teacher taught them to say the word twice and stretch it out numerous times. She also emphasizes repeatedly to not ask someone unless they need to.

Not only are these students responses mimicking her teaching, their actions are too. My findings show that repetitive teaching does work. It will help children learn the behaviors that teachers want them to.

For the strategies that weren't taught as much, the students did not use them as much. The teacher taught the students about the word wall in the beginning of the year. It was a behavior less verbalized and less observed. On the other hand, she

recently taught them about the dictionaries, and more children were observed using the dictionaries than the word wall. This supports the idea that, as teachers, we need to often revisit all strategies that students can use to spell an unknown word.

An implication of this study is also that repetitive teaching can also lead to better metacognition. Students are often not metacognitively aware of the strategies that they use unless they are reinforced. I observed these students were often being told to sound-it-out, and many of them replied to my questions with this answer.

Another implication of the study is that placement of students and materials in the room are important. The two students that used the dictionaries were near them, and facing them. When putting a classroom together the teacher needs to make the resources accessible as well as visible for all students. This will remind them and encourage them to use the resources available to them.

This study also supports the idea that children learn from each other. Two examples were the two students who said they used dictionaries and the one student who was reminded to use the word wall from the other student. These findings show the importance of social-constructivism in the classroom. Kerr and Davydov (1995) describe the teacher's role in constructivism as:

From Vygotsky's point of view the main figure in this collaboration is the child him or herself as an authentic subject. The adult, either the teacher or up bringer, using the possibilities of the social milieu in which the child lives, can only direct and guide the child's personal activity with the intent of encouraging further development (p. 17).

The two children using their dictionaries were using resources that the teacher had provided in their environment. The child that was reminded to use the word wall was

provided with help from a peer. By allowing the children to interact during writing time, the teacher has set up the opportunity for the children to help each other.

Strengths

A strength of my study is that the classroom I chose is one that I had been working in all year long. I taught alongside the teacher during writing workshop time. I was familiar with the teacher's teaching style and what she had been teaching. I was also familiar with the children's background.

The environment in which the study was conducted was kept consistent. The students were all in the same classroom. They all had assigned seats that they sat in throughout the study. These seats were based on where the classroom teacher had put them.

Another strength is my triangulation of data. I was able to ask the students during an interview, observe the students for myself and ask the teacher about her observations. Asking the teacher about her observations is important because she has been working with the children all year, and all day long. She has more knowledge on about their spelling strategies and writing over the past year.

This study was also conducted during the same time frame everyday. It was kept consistent by being during writing workshop. Writing workshop was from 8:45-9:15.

Limitations

The biggest limitation for this study was time. Even though I kept the study consistent by conducting it during writer's workshop, there were also some

unavoidable conditions. These include assemblies, snow days and days that students were absent. Due to these factors, I did not have many days to conduct my observations. Had there been more days to complete my observations, I could have taken more in depth data or possibly observed the children using more strategies. These strategies might have included the others that the students' verbalized as well.

Another limitation that I had was lack of participants. My study consisted of only four students. I cannot make any generalizations for all students based on this small amount.

Recommendations

One recommendation I would make for a future study is to tighten the limitations as much as possible. I would spend more time with the students and observe them spelling unknown words throughout the whole year. If there is more time, this will also allow for the use of more participants.

If there was more time, I would also recommend taking the study a bit farther and adding a factor in there to determine whether or not the students' strategies changed after they were taught. For future studies, one possible way of doing this would be to study the children at the beginning of the year, repeatedly teach the children some strategies, and then observe the children again at the end of the year. The children would be taught all strategies but only repeatedly taught some strategies, in order to compare their verbalization and use of these.

This is a study that could go on for years as well. Studying multiple classrooms of children over the years could help study whether or not the data is consistent among all classrooms taught by the same teacher.

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