

READING INFERENCE AND ASPECT INSTRUCTION

by

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To my family,
Alex and Lucia,
and my two favorite teachers,
Mom and Dad.

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CHAPTER ONE: INTRODUCTION

I first became aware of English Language Learners' (ELLs') difficulties with inferences during reading instruction with fifth graders last year. We were reading a novel and along the way I was highlighting several key strategies that good readers use. One of these was making inferences. By using illustrations I explained to my students what inferences are and why they are important. We proceeded to read the text and I would stop and model the inference making process. After several examples, the students began to understand what an inference was, but that did not mean that they were actually able to make their own inferences. Even after modeling and guided practice, the students were often not able to make inferences on their own. I began to wonder, what else could I do to teach inference?

I thought about my previous experiences as a teacher. When I taught in the fourth grade classroom, we simply followed the anthology used across the district. It was simply expected that my students would use inferences to aid their comprehension. Inferences were not taught. Nor when I taught abroad in an international school, where about 90% of my students were ELLs, were inferences ever taught. However, many of my students struggled with reading comprehension. The idea of teaching inferences was not brought to my attention until I began my classes for English as a Second Language (ESL) licensure at Hamline University. Around the same time, my school district was adopting an approach to literacy which teaches reading strategies to all learners. Despite

my learning gained from inservices in my school district and my classes at Hamline, my students were still struggling with making inferences while reading.

During the early stages of the online Research Methodology course at Hamline, Prof. Andreas Schramm posted the idea to work with him on one of his research areas involving aspect manipulation and its effects on reading comprehension of short narratives. What caught my eye about the topic immediately was that it involved reading comprehension. I found out later, through reading a previous student's research and speaking to Prof. Schramm, that it also involved making inferences while reading. This part of the research excited me because of my previous experience teaching this difficult skill to ELLs. My desire to conduct research that was practical to my teaching and yet interesting to me professionally drove me to start exploring this question further. My research question then became: Does explicit perfective and imperfective aspect and inference instruction improve students' abilities to make correct reading inferences? Can these results be seen over time?

Reading comprehension is making meaning from a text. One way that readers make meaning from a text is by drawing inferences. A reader makes an inference when they take the information presented to them in a text and add their own knowledge to it to draw a conclusion. Or, according to van den Broek et al (1993) "...an inference has been made when the reader activates information that is evoked by, yet goes beyond, the information that is provided explicitly in the text." For English Language Learners (ELLs) this process can be impeded in a number of ways such as confusion in the syntactic forms of aspect.

One central idea of the aspect of a verb involves the completion of an action. The aspect of a verb can either be perfective or imperfective. When a verb is in the perfective aspect, it represents a situation as a whole (Comrie, 1976). For example in, “She **WATCHED** the movie,” (perfective verb written in red capitals) the action of watching the movie is one situation in total, with the beginning, middle and end all wrapped up together in the verb **WATCHED**. However if we change the verb phrase slightly to “She **WAS WATCHING** the movie,” (imperfective verb phrase written in blue capitals) the action of watching the movie is not whole because it is continuous, with no reference to its beginning or end (Comrie, 1976). This is an example of an imperfective aspect.

Perfect or imperfect aspect can impact reading comprehension. Let’s say one of my English as a Second Language (ESL) students reads one of the following sentences within a text.

(1a) She was watching the movie and fell asleep.

(1b) She watched the movie and fell asleep.

However, this student does not have a clear understanding that (1a) which is imperfective, and (1b) which is perfective, have different meanings. In the first sentence the girl fell asleep while watching the movie, but in the second, the girl falls asleep after watching the movie. A student who does not understand this distinction could misinterpret texts and make errors in inferences. Both of these would impact the ELL’s overall comprehension of the text. The narratives used in the current study utilize both perfective and imperfective aspects, and ask students to make an inference based on

sentences like those shown above. The inferences made will illustrate the students' understanding of the perfective and imperfective phrases.

Aspect's effects on reading comprehension are important to my students' success in their academic lives. It determines the order of events within stories, the continuity of those events, and it can impact the inferences they make. Making correct inferences is a key to the reader's understanding of the text overall. In order for my students to become successful independent readers, they need to become accomplished at making correct inferences. Because accountability through standardized testing is a common worry among teaching professionals today, finding ways to increase a student's comprehension of a text is a prevalent issue. Hopefully through this research, English as a Second Language (ESL) teachers and classroom teachers alike will have one more way to enhance their students' inference-making ability through the explicit and implicit instruction of aspect and the explicit instruction of inference.

Because this project is closely related to Schramm's (1998) research and Meidal's (2008) later work, I will briefly describe their research aims and findings. Schramm's project began using simple texts to study how linguistic aspect affects the building of mental representations of causal relations and when readers use aspect to make inferences to form causal relations. The participants of the study, native English speaking adults, read short narratives with a key sentence containing either perfective or imperfective aspect. The aspect used was to indicate a certain inference the readers ought to make. The speed of the inference made showed no significant difference between perfective and imperfective aspects, and so Schramm adapted his narratives to include a gap or a

coherence break between the antecedent and the consequent. It was then found that reaction times and accuracy rates were higher for narratives containing the imperfective versus the perfective aspect. In the third experiment of Schramm's research he used verbal protocols, or a think aloud method, to determine what was in the reader's short term memory when a sufficiently long period of time had elapsed after reading the antecedent of the inference. It was found that imperfective aspects, which remain open-ended in the narratives, are more activated in the reader's short term memory than perfective aspects.

Meidal's (2008) research used the narratives from Schramm's work to find out whether ESL subjects would notice the aspectual forms within the narratives and recognize the impact of their meaning upon the narrative, without ever being taught the perfective and imperfective aspects. Meidal highlighted the forms with differences in font type and color within the narratives to help the ESL adults notice the aspects. She found that while highlighting the forms did help the subjects to notice the forms, it did not impact the subjects' abilities to make the correct inference, or interpret the meaning of the forms.

Like the studies of Schramm (1998) and Meidal (2008) the subjects of this study will read short narratives, containing either perfective or imperfective aspect story elements. The elementary students participating in this research will be required to make an inference through a question. The inference required is a backward reinstatement inference, or an inference which requires the reader to use something they have previously read which is now in their long term memory, to make the inference.

However, this research project differs from the previous work of Schramm (1998) and Meidal (2008) in its main aim: to find out whether a combination of explicit and implicit instruction of aspect and explicit inference instruction increases elementary students' understanding of reading inferences. I collected and analyzed pre-test, post-test and delayed post-test data. After the pre-test, I gave instruction in aspect and inferences. The implicit instruction includes the capitalization and color-coding of the perfective or imperfective verb phrase required for making the inference to help the reader notice the verbs' aspects. Aspect was not to be specifically taught in name, but the explicit nature of the aspect instruction included students being asked to determine whether or not an action is completed or not within a text. The explicit nature of the inference instruction included what inferences are, and why they are necessary during reading.

In this introduction, I have explained my interest in the research topic and its importance, how making inferences can affect reading comprehension, and briefly described how the research will be conducted to answer the questions: Does explicit perfective and imperfective aspect and inference instruction improve students' abilities to make correct reading inferences? Can these results be seen over time? In the next chapter, I will discuss the research behind reading inference, the types of errors struggling readers make while reading, the perfective and imperfective aspects, and effective ways to teach both inference and aspect.

CHAPTER TWO: LITERATURE REVIEW

This research seeks to answer the questions: Does explicit perfective and imperfective aspect and inference instruction improve students' abilities to make correct reading inferences? Can these results be seen over time? The first section of this literature review will address the different types of inferences, how causality and inference work together within a text, and the role inferences play in reading comprehension for struggling readers. The second section will discuss aspect and explicit and implicit grammar instruction.

Reading Inference

Reading inferences are made when a reader uses literal information in a text and background knowledge to draw a conclusion (Peregoy & Boyle, 2005). This background knowledge may come from the reader's world knowledge or from the text itself (Tapiero, et al; 2002). The process of making inferences is vital to the reader's understanding of text. Good readers make conscious and unconscious inferences during reading by filling in missing information, searching for meaning in unfamiliar words, and using their prior knowledge to relate to the text (Pressley, 2006). To reading and language arts teachers and students, inferences are made when we predict, confirm a prediction, draw conclusions, elaborate, explain, make analogies, ponder, question, paraphrase, make a text-to-self connection, a text-to-text connection, a text-to-world

connection, or an affective connection (McMackin & Lawrence, 2001). In fact, some of these inference making activities are expected of students as young as first grade (Minnesota K-12 Language Arts Standards).

Through study, van den Broek, et al (1993) identified several types of inferences: backward inferences, forward elaborations, associative inferences, and orthogonal elaborations. Orthogonal elaborations, which are not a main focus of the current study, deal with visual and spatial information from the text. However, the first type of inference I will elaborate upon and discuss is the backward inference, which contains three subcategories: connecting inferences, reinstatements, and backward elaborations. I will then describe forward elaborations and associative inferences.

All backward inferences rely on different pieces of preceding information but they also all depend on the connection made to the preceding information once the focal statement has been read (van den Broek, et al; 1993). A focal statement is the key phrase in a text that causes the reader to make an inference. The first type of backward inference I will discuss is a connecting inference. Connecting inferences connect what is being read now, the focal statement, to something that has been read recently and is therefore still in short term memory. A backward connecting inference can be something as simple as the connection between a pronoun and its antecedent. For example, “Malfoy, Crabbe, and Goyle had taken over Buckbeak. He had bowed to Malfoy, who was now patting his beak, looking disdainful” (Rowling, 1999, p.130). Through a backward connecting inference, we know that “he” in the second sentence refers to Buckbeak, not the boys Crabbe and Goyle, and that Malfoy is patting “his,” or Buckbeak’s, beak.

The second type of backward inference is a reinstatement. Reinstatements are similar to connecting inferences, except the focal statement is connected to something in the reader's long term memory. For example, from the next paragraph of *Harry Potter and the Prisoner of Azkaban*, Malfoy insults Buckbeak by calling him an "ugly great brute" (Rowling, 1999, p.130). However, earlier in the chapter, the reader learned from Hagrid that one should never insult a creature like Buckbeak because, "it might be the last thing yeh do" (Rowling, 1999, p.126). This information would be in the reader's long term memory. Upon reading the focal statement, Malfoy's insult, the reader would know immediately that Malfoy had just committed a dangerous error, by making a backward reinstatement inference.

The last type of backward inference is an elaboration. Elaborations differ from reinstatements and connecting inferences in that this type of inference relies heavily on the background knowledge of the reader to draw the inference. Whereas connecting inferences and reinstatements use previous information that the reader has read to draw an inference, backward elaborations rely solely on the knowledge that the reader himself adds to the text.

It happened in a flash of steely talons; Malfoy let out a high-pitched scream, and next moment, Hagrid was wrestling Buckbeak back into his collar as he strained to get at Malfoy, who lay curled in the grass, blood blossoming over his robes.
(Rowling, 1999, p.130)

In this example, the reader would need to know that talons are sharp, and could cause pain, and since Malfoy is screaming, and there is blood on his robes, the reader assumes

that Malfoy has been attacked by Buckbeak. Also, the fact that Hagrid is instantly wrestling with Buckbeak and Buckbeak is putting up a struggle, would lead the reader to believe that something violent had occurred. This information is not actually stated within the text. The reader has to use their background knowledge about talons, bloodshed, and what it's like to be in pain, along with Hagrid's reaction to the situation, to make this elaboration.

Forward elaborations anticipate information that has not been described in the text yet (van den Broek, et al; 1993). An example might be a prediction based on the scene from *Harry Potter and the Prisoner of Azkaban* described above. After reading about what happened to Malfoy, the reader might make a forward elaboration that Hagrid's job could be in trouble since one of his students was hurt. A forward elaboration is based knowledge of the text or characters. Even the aspect of a verb, which will be discussed more, later in this chapter, could signal a simple prediction. In "Hagrid was wrestling Buckbeak back into his collar" (Rowling, 1999, p.130) it can be assumed that the action of wrestling has continuity or is an ongoing action. It can also be predicted that later he will finish wrestling with Buckbeak. When the reader encounters this phrase of imperfective aspect, **WAS WRESTLING**, they might make a prediction that this piece of information being read now, the focal statement, could be important to something happening later in the text because it is an unfinished action.

Associative inferences, also called relational inferences, link information across a text (van den Broeck, et al; 1993). The relationship between the focal statement and the related information is not causal. In an associative inference the ideas are associated with

each other across sentences or even paragraphs (Dewitz & Dewitz, 2003). Associative inferences, “are critical to effective comprehension and indicate that a reader can track a character, an object, an idea, or a theme across a text, slowly building a more complete understanding” (Dewitz & Dewitz, 2003, p. 425). After Malfoy’s unfortunate incident with Buckbeak, he yells “I’m dying, look at me! It’s killed me!” (Rowling, 1999, p.130). Later in the chapter the reader learns that even after Malfoy has been healed of his injuries, he is still moaning in agony. This new information, taken into consideration with Malfoy’s “high-pitched” screaming and yelling, would lead the reader to associate these self sympathizing behaviors with Malfoy’s character throughout the rest of the novel.

When backward, forward, and associative inferences are formed during the reading of a text, the reader creates a network which helps the reader to understand the text. This network consists of the different events of a story and how they are connected (Tapiero, et al; 2002). The connections inferred are often causally related. An event in a story may cause another to happen, or many others to happen. These events in turn lead others to happen and so on, creating a causal network (van den Broek, et al; 1999).

In order for the reader to comprehend a text, the reader needs to be able to access and use their own world-knowledge and information from the text appropriately to generate inferences (Magliano, 1999) such as those discussed above. From personal experience, I know that many of my ESL students have difficulty with comprehension and more specifically, making appropriate inferences of all kinds during reading. However, little research exists on the inference making process among elementary age

ELLs, let alone how grammatical aspect affects inference making, which is the aim of this research project. In the next section, I will discuss what research says about struggling elementary readers, their comprehension, and inference making.

Reading Comprehension of Struggling Readers

Studies have shown that young readers can make inferences, although some studies maintain that a clue is needed in the sentence immediately preceding the focal statement (Ackerman, et al; 1990). Other studies have shown that students as young as the third grade can make spontaneous inferences for text comprehension (Casteel, 2007). What are these young inference makers doing that makes them successful readers?

First, according to Thurlow and van den Broek (1997) skilled readers read with a goal in mind of creating a coherent representation of the text in their memory. Second, skilled readers also make inferences during reading that connect what they have already read to what they are presently reading. Third, if these connections are difficult, skilled readers take the time to sort out their difficulties using elaborations, or their background knowledge, what they already know about the topic, of what they are reading. When comprehension breaks down, or the coherence of the passage is not maintained, skilled readers use a variety of strategies to aid them, such as rereading difficult passages, looking back at the text, and using their own knowledge to create reasonable explanations. Finally, skilled readers attend to the information that is most important to making inferences. They do this by paying attention to the topic as they are reading, and as any new information about the topic is found, readers add that to their mental representation of the text. Skilled readers also attend to the most important information

by paying attention to the goals and motivations of characters or events in a story that might play an important causal role.

By comparing struggling readers with skilled readers, we can see some direct contrasts between the two groups. A study that is particularly useful to the discussion of struggling readers is a 2003 study by Dewitz and Dewitz. Dewitz and Dewitz used the Qualitative Reading Inventory 3 (QRI-3) to analyze the comprehension errors of ten fourth and fifth grade students. They found that comprehension errors were due to excessive elaboration, causal inferences, relational inferences, syntax, and vocabulary. Dewitz and Dewitz also improved the comprehension of these students throughout a school year by teaching them reading comprehension strategies.

A considerable amount of research exists on struggling readers in general (Hansen and Pearson, 1983; McCormick, 1992; Cain & Oakhill, 1999; Dewitz & Dewitz, 2003; Pressley, 2006), but unfortunately the subjects of the studies presented here do not include ESL students. In fact, little research exists in regards to struggling ELL readers' ability to make inferences. For the purposes of this research project, I am forced to assume that ELLs struggle with many of the same difficulties as their native speaking peers, although their reading difficulties are compounded by the fact that they are not only learning to read, but learning to read in a language other than their first. Struggling readers have difficulty using background knowledge appropriately. They often rely on their background knowledge too much when reading, and so therefore draw erroneous conclusions about what they have read (Dewitz & Dewitz, 2003). Struggling readers also

may have trouble decoding, interpreting syntax and vocabulary, and making backward connecting inferences and backward elaborations (Dewitz & Dewitz, 2003).

There are several reasons why struggling readers are not able to use backward elaboration effectively. For one, they fail to use their background knowledge appropriately in that they do not see how or why it can help them understand the text (Cain & Oakhill, 1999). It has also been found in studies that students over-rely on their background knowledge (McCormick, 1992) when forced to make an inference through questioning. When struggling readers are forced to answer a question that they did not attend to when they read the text, they use their background knowledge and erroneously answer the question instead of looking back or rereading the text. This has been referred to as excessive elaboration (Dewitz & Dewitz, 2003). Excessive elaboration can occur through inferential answers that were unrelated to the main points of the selection, or answers that were too specific showing that the big picture of the text was missed (McCormick, 1992).

It has also been found that some struggling readers have difficulty with decoding words, or word recognition. When they read a text, their focus is on figuring out unknown words and not on attending to the text which will help them make inferences (Cain & Oakhill, 1999). Researchers have tried to alleviate this problem for students in a number of ways. Multiple readings of a text to allow the students the time to decode the first time they read, and attend to their comprehension the second time they read (Tapiero, et al; 2002). Reading the text aloud to the student (McCormick, 1992) or

allowing the student to look back at the text (Cain & Oakhill, 1999), allows researchers to moderate the problem of student decoding.

Another reason that some struggling readers have poor comprehension is due to syntax and vocabulary (Dewitz and Dewitz, 2003), two areas that could clearly impact ELLs. Students who do not comprehend text as well have more difficulty with explicit syntactic knowledge, such as word order and phrase knowledge, than students who do comprehend text (Gaux & Gombert, 1999). Also, if the grammatical aspect of a verb is not understood within a sentence, this could impact a struggling reader's ability to draw inferences from that sentence. Let's say one of my ESL students reads one of the following sentences within a text.

(1a) She was watching the movie and fell asleep.

(1b) She watched the movie and fell asleep.

However, this student does not have a clear understanding that (1a) which is imperfective, and (1b) which is perfective, have different meanings. In the first sentence the girl fell asleep while watching the movie, but in the second, the girl falls asleep after watching the movie. A student who does not understand this distinction could misinterpret texts and make errors in inferences. (The grammatical aspects of these sentences will be discussed more, later in this chapter.)

Vocabulary was also found to impact the student's ability to make correct inferences, but it is much harder to detect (Dewitz & Dewitz, 2003). If a student directly asked what a particular word meant, it was clear to the researchers that the lack of vocabulary impacted the student's ability to understand the text and be able to draw

inferences from it. However, the students tested in the Dewitz & Dewitz (2003) study were more likely to ask about a vocabulary item in a question, not in the text. For this reason vocabulary was not detected as the reason for a very large portion of comprehension problems.

The most significant finding related to this research is that struggling elementary readers have difficulty making relational and causal inferences (Dewitz and Dewitz, 2003). Relational inferences are inferences connecting more than one piece of information across the text, and are also called associative inferences (van den Broek, et al; 1993). Relational inferences allow students to make generalizations about the text. Unfortunately, some struggling readers tend to focus on one event while they are reading, and miss the over arching themes or goals that bring the text together as a whole (van den Broek, 1997).

Causal inferences were also found to be a challenge for some struggling readers (Dewitz & Dewitz, 2003). Two distinctions about causal inferences can be made. The first distinction is that something in the reader's background knowledge supplies the cause and the text supplies the effect. When the reader's prior knowledge helps them to form an inference, this is backward elaboration (van den Broek, et al; 1993). It has already been discussed that struggling readers have trouble using their prior knowledge effectively, so they would naturally have trouble with creating a causal link using their background knowledge as well. The current study uses these backward elaborations or causal inferences to test the readers' understanding of the grammatical aspect of a verb.

The second distinction is when one event in the text leads directly to another. Van den Broek's (1993) inference types do not have to but can be causally connected, while Dewitz and Dewitz (2003) separate causal inferences from others, which are relational. The important difference between the two views is that the causal inferences create a causal link, where as relational inferences do not, and van den Broek's definitions do not allow for this difference. The combined thoughts of van den Broek (1993) and Dewitz and Detwitz (2003) lead me to conclude that struggling readers have difficulty making backward inferences which are causally related and associative inferences. However, the previously mentioned research does not necessarily include ELLs, but merely struggling readers. The present research has a more specific focus of elementary ELLs and their abilities to make backward inferences. Figuring out the best way to teach these inferences is the focus of the next section.

Teaching Reading Inference

The previously mentioned research findings on the errors of struggling readers have many implications for instruction. Many reading comprehension researchers agree that inferences need to be explicitly taught (Hansen and Pearson, 1983; Brown & Palincsar 1985; Duffy & Roehler, 1987; Pearson & Dole 1987; Dewitz & Dewitz, 2003). The general consensus among these researchers is that explicit instruction, including modeling, guided practice, independent practice, and the application of inferences, is the best instruction model. I will begin by explaining the direct explanation model, followed by the closely related explicit comprehension instruction model.

Direct explanation instruction begins with modeling (Duffy & Roehler, 1989). The teacher carefully chooses a text illustrating their teaching point (Dewitz & Dewitz, 2003), such as backward reinstatement inferences. Before reading the text aloud, he/she explicitly states the purpose of the lesson and what the students will learn. While reading text to the students the teacher stops and explains the backward reinstatement inferences encountered in a think aloud fashion (Duffy & Roehler, 1989; Dewitz & Dewitz, 2003).

In the next steps the teacher gradually releases more and more responsibility to the student. In guided practice the teacher provides scaffolding, responding to specific needs of the students. Scaffolding continues across subject areas and according to what practice the students need to become independent at using the new strategy (Duffy, et al; 1987).

Modeling and guided practice from the direct explanation model (Duffy, et al; 1987), are also used in the explicit comprehension model (Pearson & Doyle, 1987). However, explicit comprehension instruction also goes on to include consolidation, independent practice, and application (Pearson & Doyle, 1987). Consolidation is implemented after guided practice. During this process the teacher reviews what, how, and why of the strategy, for example: what inferences are, how to apply inferences, and why inference making is applied. Independent practice removes the teacher scaffolding piece and places the student in charge. However, independent practice should still be seen as a part of the learning process. Mistakes made and successful strategy implementation can be discussed in reconsolidation. In the application stage of the

explicit comprehension model, the students are asked to apply the new strategy to real texts, and hopefully allow students to take full ownership of the strategies learned.

Table 1

Explicit Comprehension Model

Step	Lesson Section	Instructional Technique
1	Explicit Instruction	State purpose of lesson Use a carefully chosen text to model the strategy
2	Guided Practice	Scaffold student learning of strategy
3	Consolidation	Review the purpose of the lesson
4	Independent Practice	Students individually practice the strategy
5	Application	Students apply strategies learned in other contexts

Dewitz and Dewitz (2003) used an explicit comprehension instruction model with struggling readers in upper elementary school and found that 75% of the students tested made two or more years of growth in reading by the end of the school year. For improvement in making inferences to take place, students need explicit instruction in this strategy. The school district where I teach has adopted the explicit comprehension model and expects all teachers to use it in their language arts instruction.

With ELLs in particular, as stated earlier, syntax may affect their understanding of the text and the inferences made. In the following section I will discuss aspect, which

will be manipulated in the following study to test the inference making abilities of two 5th grade ELLs.

Aspect: Perfective and Imperfective

One factor that effects inferences made during reading is the perfective or imperfective aspect of a verb. In the next section of this literature review, I will discuss what aspect is, how it can affect a reader's understanding of text, and an instructional strategy for teaching aspect.

There are two important types of aspect, situational and grammatical. Klein (1994) discusses the situational aspect, or the time properties of a sentence, by using 0-state, 1-state, 2-state lexical contents. 0-state lexical contents have no beginning or end point. "Julian is a good eater," has no beginning point. When did he begin being a good eater? Nor does "Julian is a good eater," have an end point. At some point did he stop being a good eater?

"Julian ate dinner," fits into the 1-state category because dinner would have a beginning, when he started to eat, and an end, when he finally finished eating. There were many times before and after dinner that Julian was not eating. 1-state sentences can be tested by placing a time limit on the event. "Julian ate dinner for an hour," makes sense when compared to the 0-state, "Julian is a good eater for an hour."

2-state lexical contents have a before and after contrast. "Julian finished the appetizer," marks the end of one state and the start of another. The first state involved in this past progressive sentence is that Julian was eating the appetizer, and the second state takes place immediately after he is done eating. A test for the 2-state property is to ask if

Julian were interrupted while finishing the appetizer, did he finish it? The answer is no, and so therefore, this sentence is a 2-state sentence. Situational aspect is determined by the meaning of the verb, not the verb's grammatical tense or aspect.

Grammatical aspect is often confused with tense. They are both semantic domains. Tense relates the time of a situation being described to the time of utterance, also sometimes called the time of speaking. Tense expresses three such relationships: past, present, and future. Something described in the past tense took place prior to the moment of speaking. Present tense describes a situation taking place simultaneously with the moment of speaking, and future tense locates the time of a situation to be after the moment of speaking (Comrie, 1976). While many refer to simple, perfect, and progressive *tenses*, these are actually the aspects of the English language. Tense and aspect work together in the English verb system.

Semantically, the aspect of a verb can either be perfective or imperfective (Comrie, 1976). Perfective aspect represents an event as a whole (Comrie, 1976) and is punctual (Hopper, 1979). It can be used to relate or narrate events. The morphosyntactic tense-aspect system in English has six cases of perfective aspect: simple present, simple past, simple future, present perfect, past perfect, and future perfect (Celce-Murcia & Larsen-Freeman, 1999). In Table 2 below for each of these cases, the action stated is a completed event, or a whole.

Table 2

Perfective

Aspect/Tense	Example
Simple present	I make the bed.
Simple past	I made the bed.
Simple future	I will make the bed.
Tense/Aspect	Example
Present perfect	I have made the bed.
Past perfect	I had made the bed.
Future perfect	I will have made the bed.

The perfective aspect is used in discourse to relate or narrate events in the foreground (Hopper, 1979), or events of importance to a storyline. In the following brief report of an event, each of the verbs (in capitals) is in the perfective. “I **WOKE** up, I **ATE** some breakfast, and I **TURNED** on the TV.” The perfective aspect foregrounds these main events of this short narrative (Li, et al., 1982).

However, foregrounded information is better understood by comparing it to backgrounded information, written in capitals in the following example: “Snow **WAS FALLING** quietly outside when I woke up, I ate some breakfast, and I turned on the T.V.” The addition of “Snow **WAS FALLING** quietly outside when...” is an example of background events. The predicate, **WAS FALLING** used for this addition is imperfective because it states an action that has not been completed or is ongoing (Li, et al; 1982). “The snow falling” is a durative, or lasting, event which continues throughout the rest of

the short narrative. The use of the imperfective, “extends the event in time and thus allows for its change or interruption,” (Celce-Murcia & Larsen-Freeman, 1999, p.126).

There are also six imperfective morphosyntactic forms in English: present progressive, past progressive, future progressive, present perfect progressive, past perfect progressive, and future perfect progressive (Celce-Murcia & Larsen-Freeman, 1999). In Table 3 you will see that all forms of the imperfective given contain the progressive *-ing* form.

Table 3

Imperfective

Tense/Aspect	Example
Present progressive	I am making the bed.
Past Progressive	I was making the bed.
Future Progressive	I will be making the bed.
Present perfect progressive	I have been making the bed.
Past perfect progressive	I had been making the bed.
Future perfect progressive	I will have been making the bed.

The current study focuses on one perfective and one imperfective case, simple past and past progressive, respectively. These two forms are used because 1) the simple past can describe an event or action that was completed in the past, and 2) the past progressive is used to describe an action in progress at a specific point in time in the past (Celce-Murcia & Larsen-Freeman, 1999). These forms are used in a statement within a

narrative in this study, and because each form implies that an action is either complete or on-going, the verb form used indicates a certain inference to be drawn by the reader.

To native speakers, the use of the simple past and the past progressive happen naturally, and when these forms are read, it is implicitly understood that the former is a completed action, and the latter is ongoing. However, when ELLs read these two forms, they may not have the clear understanding of a native person. This could impact the inferences they make, and their comprehension of the text overall.

When teaching these forms to ELLs, many second language researchers agree that unintentional learning is not as effective as intentional learning (Hulstijn, 1992; Skehan, 1992; Schmidt, 1990). Whether or not learners are intending to learn, attention to the material is vital to learning (Schmidt, 1993). When the learner attends to learning, based on the quantity and quality of the attention (Logan, 1988), input can become intake (Scovel, 1991; van Lier 1991). Schmidt (1990) asserts that noticing is also an important factor “in the conversion of input to intake” (Schmidt, 1993, p.209). In order for students then to learn subtle differences in meaning between the simple past and the past progressive, students will need to attend to the forms, and this can happen through noticing the forms.

From Schmidt’s (1993) study, it seems that both noticing can lead to learning, and instruction can lead to noticing. In his own diary study of his learning Portuguese (1986), Schmidt found through the record of noticing in his diary, compared to tape recorded conversations with native speakers, there was evidence that what he had noticed, he had learned and applied later. This shows that noticing can lead to learning, but it has also

been shown through Foto's (1992) study that knowledge of a specific grammar point through instruction or an awareness raising activity leads to significantly more noticing of the grammar point in the weeks following. Hence, instruction can also lead to noticing.

Many L2 (2nd language) students of English may not have noticed the differences in meaning between past progressive and the simple past on their own. If students continue to struggle with aspect in their speech, writing, and/or reading, it seems logical that these students would need grammar instruction or a consciousness raising activity to focus their noticing because time has shown that they do not understand the meanings behind aspect.

There is much debate among language learning experts about whether or not grammar instruction should be explicit or implicit for a language feature such as the aspect of past progressive and simple past. Because the first language (L1) is learned implicitly, many researchers believe that second language (L2) learning should be the same (Reber, 1989, 1992). Some researchers question whether certain language features could be acquired more easily explicitly or implicitly (Schmidt, 1993). Doughty (1991) used a computer assisted learning program to study the effects of three treatments: an explicitly given rule group, a meaning targeted group that used highlighting and capitalization of target forms, and a control group. The meaning targeted group outperformed both of the other groups, suggesting that enhanced input can trigger awareness and learning.

Taking the work of these researchers into consideration, the effects of highlighting or capitalizing the language forms of past progressive and simple past within

a text, could be enough to lead to the learner's intake of the meaning of these forms implicitly. In Meidal's (2008) study, related to the current project and Schramm's (1998) work, input enhancement may have resulted in intake. However, Meidal's (2008) study did not include instruction. The current project uses a combination of explicit and implicit grammar instruction and explicit comprehension instruction to see their effects on making correct inferences.

Synthesis

The main areas of focus of this study are the comprehension strategy of making inferences, the linguistic feature of aspect, and the instruction of both. Putting these differing ideas into one study began with Schramm's (1998) study of English speaking adults in which he used narratives to discover whether perfective or imperfective was more activated in the reader's short term memory. The narratives used either perfective or imperfective aspect to lead the reader to make a certain inference. The results relied on the comprehension of the subjects and their ability to make inferences. Schramm found that imperfective aspects, which remain open-ended in the narratives, are more activated in the native reader's short term memory than perfective aspects.

Meidal (2008) then used Schramm's narratives for a study of ESL adults. She highlighted the perfective and imperfective forms to see if the subjects would notice the forms and use them to make a correct inference. By using the think aloud method, she did find that highlighting made the subjects notice the aspect forms, however the subjects did not necessarily make a correct inference. Meidal's study recommended instruction in

the meaning of the aspectual forms used to see if the subjects could then make a correct inference.

Through this study I hoped to find whether or not instruction in making inferences and aspect helped in my students' ability to make correct inferences and can these results be seen over time. Both Schramm's and Meidal's studies relied on the subjects' reading comprehension of aspect to make an inference. This study added not only Meidal's suggestion of aspect instruction, but also instruction in the comprehension strategy of making inferences. Even with instruction however, there are still many factors that can influence the reader's ability to make a correct inference. In the case of ELLs, vocabulary and cultural familiarity, plus reading fluency and the amount of background knowledge, all may influence how well a reader understands a narrative and therefore, the reader's ability to make a correct inference. Despite these factors, I hoped to see an improvement in making inferences after instruction in making inferences and the meaning of the perfective and imperfective aspects.

In Chapter Three I will discuss the subjects, two fifth grade ELLs, and the setting, a suburban elementary school. I will also describe the methods and materials used for this study, the reading of short narratives involving an inference question. My rationale for their use will also be given.

CHAPTER THREE: METHODS

In this chapter I begin with information about the setting and the participants of the study. I discuss the methods of data collection, pretest, posttest, and delayed posttest, and explain why this method was chosen. I describe the materials used for data collection. This study seeks to find out if explicit perfective and imperfective aspect and inference instruction improve students' abilities to make correct reading inferences and can these results be seen over time.

Participants and Setting

The elementary school where this study was conducted is in an outer ring suburb of a major city in the upper Midwest. The school's population is 17% English Language Learners, and there are students of grades Kindergarten through fifth grade in attendance. The research was conducted in a small classroom used for English as a Second Language (ESL) instruction.

The participants of this study were two 5th grade boys who are English Language Learners (ELLs). For their anonymity, the boys' will be referred to as Carlos and Omar. The language backgrounds of these two boys are Spanish and Somali, but they have both been studying English since kindergarten or first grade. Both were tested in the beginning of their 5th grade year using the LAS (Language Assessment Scales) (Duncan & DeAvila,

1988) and were found to be limited readers (level 2). Carlos and Omar were in the same 4th and 5th grade homerooms and participated in the same ESL classes.

The two boys' have struggled academically in reading and sometimes other subject areas as well. This struggle could be seen in their MAP (Measures of Academic Progress) test scores (Northwest Evaluation Association) and their DRA2 (Developmental Reading Assessment, 2nd Edition) independent reading levels (Beaver & Carter, 2006), which both showed the students reading at a 3rd grade level, though these assessments are normed with native speakers rather than ELLs. The report cards of both students also showed their academic struggles through low (C or D) to failing grades (F) in at least 50% of the academic subject areas after the first quarter of fifth grade. Both students have participated in ESL instruction at this school since the beginning of the 2007-2008 school year when they were new to the school. Carlos and Omar are pleasant students who work hard and have a good attitude, but despite this, always seem to come up short academically.

Linguistic Target

Through this research project I hoped to find out if instruction in making inferences by focusing on the aspect of a verb would help my students make better inferences, and if any inference making abilities were retained over time.

Materials

This study used three paper and pencil tests, the pretest, posttest, and delayed posttest (Test format can be seen in Appendix C). Each test consisted of 8 different narratives (See Appendix A for all 24 narratives), and a question requiring the student to

write an inference at the end of each narrative. The format of the tests was chosen because it would be more natural for the students to read a text as a whole paragraph than if the narrative were presented one line at a time as was the case in Schramm (1998) and Meidal (2008). These tests were used for the quantitative portion of the study.

After the posttest and delayed posttest a microphone was used to record each student's interview. The interviews were used for the qualitative portion of the study to discuss what the students noticed during the reading of the narratives and to discover whether or not students were able to apply their learning about aspect and making inferences.

Data Collection Methods

This is a mixed methods study containing both quantitative and qualitative data. The pretest and posttest design was recommended by Meidal (2008) in her study, and constitutes the quantitative aspect of the study. The pretest posttest design is ideal for showing an immediate effect after treatment (Mackey & Gass, 2005), or lesson in this case. By using this design, I had clear baseline data, which after some inference and aspect instruction, I could directly compare to posttest data, and later to delayed posttest data.

The qualitative portion of the study consists of observations during testing, instruction, and interviews which were conducted individually immediately after the posttests and delayed posttests were administered. These interviews were recorded to be analyzed later. The goal of the interview was to discuss what the students noticed during the reading of the narratives (See Narrative Design) and to discover whether or not

students were able to apply their learning about aspect and making inferences. The questions were not planned, but based on the individual subjects' responses on their tests. Some questions included, "How did you get your answer?" "What were you thinking about?" "Did this red/blue word help you?" and/or "What did you notice?"

Scoring

The pretest, posttest, and delayed posttest data were analyzed using a 2-point scale. The 2-point scale was used because it shows how many inferences each student made out of the total number of possible inferences. Most imperfective narratives were worth a total of two points, and most perfective narratives were worth one point on this scale (See Narrative Design below). If the student's answer was not complete, meaning they did not find both the possible antecedents for a situation, the inference was given partial credit of one point. If the student did not reach a correct inference at all, they were given zero points.

In order to determine whether or not students used their instruction in aspect to help them make inferences, the interviews which took place after the posttests were also analyzed for patterns in learning and noticing. The students were asked a set of questions about the narratives for the posttest, including "What were you thinking about when you answered this one?" for both a narrative they answered correctly and a narrative they answered incorrectly. They were also asked whether or not the highlighted verb helped them to answer a question. For the delayed posttest, the questions remained the same, except additional questions were also added based on each student's individual performance on the posttest.

Procedure

Narrative Design

The participants of the study read eight narratives in each of a pretest, posttest, and a delayed posttest (See Appendix A for all 24 stories and Table 5 below for an example narrative). The students were asked to read lines 1-8 of the narratives twice in order to diminish the effects of word recognition problems (Tapiero, et al; 2002). However, students were also allowed to ask questions about words they did not know. After the second reading, the student turned to the next page and read the question (line 9) which asked for the inference to be explained. The students then answered the question by writing on the lines given. The subjects were not allowed to look back at the text because they would then be using their short term memory to make an inference, rather than their long term for a backward elaboration inference.

After reading a narrative, the students were asked a question requiring a backward reinstatement inference. The students were not able to look back at the text to answer the question because if the student were to look back, this would no longer be an inference using the students' long term memory, but a backward connecting inference using short term memory.

The narratives were based on Schramm's 1998 study. The original narratives were all written for adults with sentences containing the lexical aspect of accomplishment. However, the narratives of the original study were not age-appropriate in vocabulary and/or topic for my younger participants. Hence, some of the original

narratives were rewritten to be readable and understandable to upper elementary students, but many stories were written from scratch.

Because the participants of the study were reading below grade level according to multiple measures, as stated above, all the narratives were analyzed using the Flesch-Kincaid Grade Level Readability Formula (Kincaid et al; 1975) to ensure that they had a reading level between grades 3-4 (See reading levels of stories in Appendix A). The Flesch-Kincaid Level Readability Formula computes the number of words per sentence, and the number of syllables per word to calculate a reading level, which is then further calculated to correspond to a particular American grade level.

Each test consisted of eight narratives, with four narratives using the perfective antecedent (in capitals and highlighted in red) and four narratives using imperfective antecedents (in capitals and highlighted in blue). Not only were specific grammatical aspects used for the antecedents within the narratives, but also specific situational aspects had to be chosen. Only 2-state situational aspects (Klein, 1994) were used, or predicates with a before and after contrast, such as the earlier example, “Julian finished the appetizer.”

The eight narratives’ reading levels (Kincaid et al; 1975) were averaged together to ensure that the pretest, posttest, and delayed posttest were all approximately the same difficulty overall. However, I chose to make each test slightly more difficult in reading level than the previous test. If improvements in making inferences were made, I did not want the improvement to be attributed to the reading level of the test as a whole. For example, if the narratives for the delayed posttests had the lowest average readability of

the three tests, and the students showed improvement in their inference making, then that improvement could be due to the fact that the narratives were easier to read.

Table 4

Test Readability Averages

Test	Narratives' Average Flesh Kincaid Readability
1. Pretest	3.4675
2. Posttest	3.5575
3. Delayed Posttest	3.66

Each narrative contained eight sentences followed by a question, as in the following example in Table 5. Every narrative follows the same pattern as the story below.

Table 5

Example Narrative: The Reader

Line/Narrative Role	Sentence
1 Background	Amy was a very quiet and shy little girl, who loved to read.
2 Background	She often kept herself shut up in her room just to finish a few more pages.
3 Initiating Event	One beautiful afternoon, Amy was lying on her bed reading.
4a Antecedent 1	She PUT a bookmark in her book.
4b Antecedent 1	She WAS PUTTING a bookmark in her book.
5 Antecedent 2	Amy got up and opened the window to let in the breeze.
6 Filler	The weather had been extremely hot lately, but her mom refused to turn on the air conditioning.
7 Filler	Amy watched the trees blowing outside and felt the cool wind on her face.
8 Consequent/ Focal Statement	When she turned back to her book, she had lost her page.
9 Final Question	Why did Amy loose her page?

The text begins with two statements referring to the background information of the story such as the setting and main character. The settings and characters were chosen specifically to relate to an upper elementary age student. In general the stories are about children, parents, or a person of a nondescript age doing an activity of which the student would be familiar. These activities include eating, cleaning, playing outside, or completing a school project, among others. In Table 5, the main character is Amy, a little girl who loves to read.

The third sentence marks an initiating event of importance to the plot. This third sentence carries importance because its events lead into the fourth sentence. In line 3 of Table 5's example, Amy was lying on her bed reading. The fourth sentence uses the ideas of third sentence to accelerate the storyline and contains the verb phrase which will either be imperfective (4a) or perfective (4b) aspect. The subject either read 4a or 4b in their version of the test. The verb phrase used indicated a particular outcome that the reader should infer, and is thus called antecedent 1. For example, if the student read the imperfective version, "She **WAS PUTTING** a bookmark in her book," he would infer later that Amy lost her page because the bookmark was not quite put into place and/or from the wind blowing. However, if the student read the perfective version, "She **PUT** a bookmark in her book," he would assume that Amy has finished putting the bookmark in her book, and therefore would more likely to infer later that she lost her place in the book because the wind blew her pages. The imperfective version has two possible inferences, while the perfective has one possible inference.

The fourth line needed to contain a 2-state lexical context like “She **WAS PUTTING** a bookmark in her book,” and “She **PUT** a bookmark in her book,” in order for this sentence to be an antecedent. To demonstrate that this is a 2-state lexical context one can apply the following test: If Amy was interrupted when putting in her bookmark, has she put in the bookmark yet? Since the answer is no, this is a 2-state situation. If this line 4 were “Amy was thinking about something she had just read,” using a 1-state lexical context, the situational aspect would not allow for the reader to infer a causal relation. One can apply the following test: If Amy was interrupted while thinking about something she had just read, has she thought about it yet? Since the answer to this question is yes, then this line becomes irrelevant to the causal relation at the end of the narrative, and the inference made would automatically come from antecedent 2. Hence, in order for the reader to need to pay attention to the aspect in line 4 when the consequent occurred, a 2-state lexical context had to be used.

The fifth sentence, antecedent 2, provides the second possibility for the inferred answer. If the fourth sentence was perfective, “Amy **PUT** a bookmark in her book,” this activity has been accomplished, and so the fifth sentence becomes the antecedent of the inference, or Amy has lost her place because of the blowing wind, not because of not putting in her bookmark. However if the fourth sentence is imperfective, “Amy **WAS PUTTING** a bookmark in her book,” both the fourth and the fifth sentences could be the antecedents because she could have lost her place from either not getting the bookmark in or the blowing wind. Again, a perfective antecedent 1 generally has one solution, and an imperfective antecedent 1 generally has two solutions.

The sixth and seventh sentences are filler statements which keep the story moving, but distract the reader somewhat from the antecedent statements. These statements are meant to provide a gap between the antecedent statements and the final consequent, which was the eighth sentence of the narrative. This final consequent is the focal statement of the inference. The filler statements ensure that neither of the antecedents remains in short-term memory any longer. Therefore when the consequent or focal statement is read, this should trigger a backward reinstatement inference. After the participants read sentences 1-8 twice, they were then presented with sentence 9, the final question in which they were asked to state the inference made.

The verb phrase was written in capital letters and color coded, red for perfective, blue for imperfective, so the reader would notice it. Meidal (2008) recommended that capital letters be used for the key verb phrases in a future study, as this feature was noticed by the participants of her study. Capitals were used, although the students were not directed to pay attention to the capitalized forms specifically as suggested. Capital letters were also used by Doughty (1991) to enhance the input and focus the reader's attention.

After the pretests were given, the students participated in lessons involving reading inferences and aspect.

Irregular Narratives. In most narratives, when antecedent 1 was imperfective, there were two possible inferences, and when antecedent 1 was perfective, there was one possible inference. However there were a few different irregularities within a few stories.

For example in *Computer Troubles*, *The Lost Ring*, and *The Jokester* there was only one inference to be made from the first antecedent in their imperfective versions, rather than two possible inferences.

3 *The Jokester*

Chris was a real practical jokester. His friends could never be too careful around him. His favorite trick was the simple bucket over the door trick. Chris **WAS PLACING** the bucket full of water expertly over the slightly open door. Chris jumped down and realized that he had somehow tracked dirt and mud all over the clean floor. His mother would be absolutely furious with him. She was such a neat freak and really hated a messy floor. When she charged into the room, she was shocked.

Why was Chris' mother shocked?

In this particular narrative, if Chris **WAS PLACING** the bucket full of water over the door, then he had not completed that action. Since the bucket was not placed above the door, Chris's mother could only be shocked from the dirt and mud on the floor. In most of the stories the imperfective versions allowed for two inference possibilities. However, the three narratives mentioned earlier only had one possible inference in their imperfective versions.

Another narrative irregularity occurred in the story *Movies or No?* In the perfective version of this story, there are still two inferences examples, rather than one.

4 *Movies or No?*

Matt really wanted to go to the movies today. He had asked his mom days

ago, and she had promised to let him know this morning. Matt had been checking his phone for a text all morning to see if she had said yes. She finally **SENT** the message. Just then the veterinarian called to tell her that he had just spoken with Matt, and that the old family dog, Mr. Boe, was not doing well. After that her boss had called to get an update of her project. Matt's mom thought about how balancing family and work can be very demanding. Meanwhile, Matt was feeling very depressed.

Why was Matt feeling so depressed?

Matt could have been depressed for two reasons. The first was that Mom **SENT** the message, but she said no, Matt couldn't go to the movies. The second reason he could have been depressed was because his dog was sick. The perfective version of *The Joker* also had two inference possibilities, rather than just one. (Read (3) above replacing the blue with **PLACED**.)

There were other irregularities that occurred within individual stories, such as when a correct inference can be drawn from a part of the story other than the antecedents (*The Snowman* and *The Lost Ring*) or when the question unintentionally asks the reader to make more than one inference (*The Tooth* and *The Lost Ring*). The narratives were difficult to craft within the appropriate reading level, using vocabulary and contexts that were accessible to my ELL's proficiency levels, and without imperfections.

Instructional Design

Meidal (2008) concluded that more explicit instructions be given to the students as to what they should be looking for, including making the students more aware of the

aspect. Inference instruction included the explicit comprehension model, used with much success by Dewitz and Dewitz (2003). The students were not given explicit instruction about what aspect is, but within a text containing inferences for practice, they were asked to determine whether or not an action was completed. All instruction was completed in a group. In the following section I will describe the instruction day by day.

Day 1 instruction: explicit and implicit grammar. The objective of the first day of instruction was that students will be able to distinguish between sentences that contain a completed action versus an incomplete action. This objective was also placed on the board in a student friendly version and read to the students. To begin their study of this topic the students looked at sentences that only differed in their use of the imperfective past progressive and the perfective simple past. In order to aid the students' noticing of these verbs, they were written in capital letters and color coded, blue for the imperfective, red for the perfective, such as the examples below, throughout all the examples given during the lessons.

5 She **WAS SLEEPING** soundly. (caps in blue)

6 She **SLEPT** soundly. (caps in red)

The students were then asked what the differences are between these sentences and if the sentences mean the same thing. Next, I presented the students with two more sentences which accompanied the first set of sentences, 3 with 3a and 4 with 4a.

5a Suddenly, a loud crash jolted her awake.

6a When she woke up the next morning she felt well rested.

I then asked the students, “Why would you match these sentences together? Why does this make more sense?” The students had some ideas, but were not able to pin-point that the action of 1 is on-going, which leads into the next action of something happening suddenly. The action of 2 is complete, and so the next action in the series makes more sense. This distinction was then pointed out to the students.

The students were then asked to look at a new set of sentences and were asked “Which of these sentences has an on-going action? Which of these sentences has an action completed?”

7 Abdul **WAS PLAYING** basketball.

8 Cesar **PLAYED** basketball.

After clarifying which sentence is on going (5) and which action is complete (6) the students were asked to match sentences 5 and 6 with the sentences below and explain their reasoning.

8a It was getting late, so he decided to go home.

9a Later, he did his homework.

To now move the students to more independent practice, the students were given a pair of verbs written in perfective (**ATTACKED**) or imperfective aspect (**WAS ATTACKING**). Each student took a verb phrase and then wrote a sentence containing it. Then with the completed sentences the students had created, as a group we thought up a sentence that could accompany it. Once we had written the second set of sentences to accompany the first set, we tried to switch the pairs of sentences to see if the pairs

worked with the other sentence too. This was done to convince the students that a verb's aspect can determine what will come next.

The students were given a small homework assignment on this first day of instruction. Using the verb phrases **WAS RESTING** and **RESTED**, the students were to write a sentence and a following sentence that matches it. The next day the students had to match their partner's sentences.

Day 2 instruction: reading inference modeling. The instruction on Day 2 and for the rest of the week focused on reading inference, but an effort was made each day to remind the students of their instruction with verbs showing completed and not completed actions. Day 2 instruction began with reviewing the homework assignment from the previous day.

To make the reading inference instruction explicit, the objectives were stated for the students: This week we are going to be learning about reading inference. I used the following introduction to get the lesson started.

Making inferences is something that good readers do. By learning about making inferences I hope that it will help you to understand what you are reading better and become better readers.

This goal was also posted on the board so the students' objective is clear throughout the lesson: "You will be able to make inferences while reading to help you understand the text better."

Another part of being explicit is giving the student a clear picture of what an inference is. I used the following words to explain this concept to the students, along with a picture illustration (See Appendix B).

An inference is something you do in your mind. When you read, sometimes the author does not tell you everything in the exact words, but your mind has to fill in the missing information.

Next, I gave some examples of simple inferences, which can be seen in Table 6. The verbs in the examples can also be used as quick reminder about complete and incomplete actions, and so were written in all capitals to help the students notice this.

Table 6

Examples of Simple Inferences

Words the Author Uses	Reader's Thoughts	Inference
1 "He WAS PEDALING home as fast as he could."	You pedal a bike.	He was riding a bike home.
2 "He WAS PEDALING home as fast as he could.		
He GLANCED at his watch to check the time."	You might check the time if you're running late.	He's late for something at home.

Following the explicit comprehension model, the last part of the instruction on this day involves modeling the reading skill of making inferences. The book I chose to use for modeling is *My Name is Yoon*, (Recorvits, 2003), a picture book about a young

ELL from Korea who is adjusting to her new school and to learning English. I chose this book because I wanted the students to have background knowledge on the main themes involved.

The modeling I used focused on backward connecting inferences, backward reinstatements, and backward elaborations. I would read the text aloud and model my thinking aloud. For example, after a classmate gives Yoon a cupcake, she envisions that she is a flying cupcake, entertaining her classmates. Based on Yoon's previous imaginings, including herself as a cat wanting to hide and a bird wanting to fly away, the reader can infer that Yoon is becoming happier now with her new life.

Day 3 instruction: guided practice and consolidation. I began by refreshing the students' memories on the objective of these lessons, and referred to the objective on the board. For the guided practice portion of the explicit comprehension model, we read a picture book together called *The Stranger* (VanAllsburg, 1986). In order to understand the ending of this book, the students had to put together many small things the author says through out the book, to make a backward reinstatement inference at the end. While we read the book, the students used highlighter tape to mark places in their own copy where the stranger does something strange or when something strange happens in the book.

The Stranger is about a man who is hit by a car, and taken in by a family who lives on a farm. While he stays with them, he remains mute and seems not to remember who he is. Through many strange happenings throughout, such as his cold breath

changing the color of a leaf, the ending of this book reveals that the stranger is the season of fall.

As I read the book aloud I paused to discuss possible places to use the highlighter tape at first, and then read with fewer stops to allow the students to find their own strange occurrences. Then I continued reading through to the end and discussed the meaning of the ending, “What inference can you make?” and how the strange details in the book lead you to make this inference at the end.

To review the grammar concept of complete and incomplete actions, I asked the students to return to a particular page in the book which contained complete and incomplete actions. I asked the students to identify both complete and incomplete actions on this page, which was more difficult than previous days’ instruction because the verbs were not in capitals letters. I also asked the students to take one of the completed actions on this page, and change it so it was incomplete.

The next step in the explicit comprehension model is consolidation, the what, how, and why of a comprehension strategy. To consolidate instruction, we had a conversation about what inferences are, how to apply inferences during reading, and why inference making is applied. The illustration I used and the objective on the board served well for the consolidation process.

Day 4 instruction: independent practice and reconsolidation. For the independent practice portion of the explicit comprehension model, students read either *The Sweetest Fig* (VanAllsburg, 1993) or *The Garden of Abdul Gasazi* (VanAllsburg, 1979), which are both in the third grade level by Lexile level (Lexile Framework for Reading FAQ, 2009).

Both of these picture books have backward reinstatement inferences at the end, but for the students' sakes I called these "ending inferences." These backward reinstatement inferences combine what the reader read, which is now in their long term memory, with what they know in their own background knowledge, to make an inference at the end of the book. The students were challenged to make the inference at the end and be able to explain it through the previous event or events in the book. This activity allowed for me to see whether or not the students could use more practice or needed reteaching.

I also decided to reconsolidate, or review the concept, at the end of this lesson because I wanted to ensure that the students had a clear picture of the what, how, and why of making inferences during reading.

Day 5: application. To see the application of their learning, posttests were administered immediately following this instruction, which included modeling, guided practice, consolidation, and independent practice. The students took a posttest similar to their pretest, but with different narratives. Pretest and posttest data were needed to compare whether or not the students had improved or not in making inferences after the instruction. In order to see whether or not the explicit and implicit instruction impacted the students' inference making in the long run, a similar delayed posttest was given one month later, using eight new narratives (see Narratives in Appendix A).

In summary, two 5th grade ESL students were asked to make inferences from narratives, in which the aspect of a verb had been manipulated in an antecedent. Their responses determined whether or not they understood the grammatical aspect of the verb. After a pretest, the students received instruction in making inferences and the meaning of

perfective and imperfective aspect. Following the instruction the students took a posttest and a delayed posttest one month later. The next chapter will discuss the results of this study.

CHAPTER FOUR: DATA ANALYSIS AND RESULTS

My research questions are: Does explicit perfective and imperfective aspect and inference instruction improve students' abilities to make correct reading inferences? Can these results be seen over time? I studied explicit and implicit instruction in aspect and reading inference on elementary ESL readers' abilities to make a correct inference.

Struggling readers have difficulty using background knowledge appropriately, decoding, interpreting syntax and vocabulary, and making backward connecting inferences and backward elaborations. However, by using an explicit comprehension model of instruction, these difficulties have been improved in struggling readers of elementary age (Dewitz & Dewitz, 2003). By using this model of instruction to teach reading inference, paired with teaching students about the meaning of different aspects, may be one way to improve reading comprehension and inference making for struggling ESL readers.

In this chapter, I present the two students' results on the pretest, followed by comments regarding their participation in the lesson. Next, I describe each student's results on the posttest and delayed posttest, including the interviews conducted after each test. I summarize each student's results in general and provide an overview of the two students' results together.

Pretest

Pretest Results - Overall

Carlos and Omar made correct inferences 35% of the time. There were 23 possible inferences and the boys made a total of 8 correct inferences. Although the goal of the narratives was to draw the reader to make an inference from antecedent 1 and/or antecedent 2 depending on the aspect of the verb phrase, the boys drew inferences from every part of the narratives: the background information, antecedent 1, antecedent 2, filler statements, and the consequent (See Table 7 below). For the purposes of this study, background knowledge is the world knowledge that the reader has before even reading the text, and background information, listed in the table, is the knowledge the reader gained from the first few lines of the narrative. Most inferences were drawn from antecedent 2 and the filler statements, which is likely due to recency effects.

Table 7

Inferences Drawn From Different Parts of the Narratives

Narrative parts	Inferences by narrative part
Antecedent 2	8
Filler	5
Background information	3
Antecedent 1	3
Consequent	1

Neither participant made an inference from antecedent 1 when the narrative was imperfective. If the students understood the meaning of imperfective aspect, they could have drawn an inference from it at least some of the time. For example, from the narrative *The Reader* about Amy from Chapter 3, “She **WAS PUTTING** a bookmark in her book,” would lead the reader to infer later that Amy lost her page because the bookmark was not quite put into place and/or from the wind blowing. However, if the student read the perfective version, “She **PUT** a bookmark in her book,” he would assume that Amy has finished putting the bookmark in her book, and therefore would more likely to infer later that she lost her place in the book because the wind blew her pages. The imperfective version has two possible inferences, while the perfective has one possible inference. Because neither of the boys drew an inference from antecedent 1 of an imperfective narrative, it could show that at the time of the pretest, they did not know what imperfective aspect means in the context of a narrative. However, children are conditioned early on in their academic experiences that there is only one right answer. This could also have impacted why they only put down one possible inference, rather than two in the imperfective narratives.

Omar’s Pretest Results

Individually, Omar received four points out of eleven on the pretest, which means that out of eleven possible correct inferences, he made four correct inferences for a 36% correct (See Table 8 below). His earned points consisted of four 1-point answers, meaning for even the imperfective narratives, he drew only one of the two possible inferences. Incidentally, the correct inference made from an imperfective narrative was

not drawn from the first cause, but just from the second, backup cause or antecedent 2 (A2) (See Table 9 below). Omar had more success with the narratives that contained the perfective aspect, for which he made three correct inferences, rather than the imperfective, in which he only made one correct inference.

Table 8

Omar's Pretest Results

Aspect	Inferences Possible	Inferences Made	Percent Correct
perfective	4	3	75%
imperfective	7	1	14%
combined	11	4	36%

Omar may have been guessing on the pretest. Many of his answers, three out of eight, began with the word, "Maybe," showing uncertainty. However during the pretest, Omar told me that he realized that the questions asked came from the last sentence of the text, or the focal statement (van den Broek et al; 1993). This gave him an advantage because he could figure out ahead of time what the question would be.

Omar made incorrect inferences using either background information from the beginning of the narrative or the filler information from the end on three out of eight narratives. These three inferences guesses from other parts of the story were all in the first five narratives, but on the last three narratives, once he had figured out the pattern of the questioning, all his guesses were from antecedent 1 or 2. This shows that he was more accurate after realizing the pattern in questioning.

Table 9

Omar's Pretest Answers

Narrative	Aspect	Inferences From...	Inferences Made
1	imperfective	filler	0
3	imperfective	filler	0
2	perfective	antecedent 1 & 2	1
6	perfective	antecedent 1 & 2	1
7	imperfective	antecedent 2	1
8	perfective	antecedent 2	1
4	perfective	antecedent 1	0
5	imperfective	background information	0

There were four imperfective narratives on the pretest. When making inferences with those narratives, Omar never referred back to antecedent 1 containing the imperfective phrase. This would show that the imperfective aspect and highlighting thereof did not have any effect on the inference he made. In fact, when Omar used antecedent 1, he did so incorrectly when the narrative was perfective. However, Omar

did notice the highlighted words during the pretest and he asked me why some words were colored. I did not answer his question, but I complimented him on his observation.

Carlos's Pretest Results

Carlos received 33% correct, showing that he did make an appropriate inference a third of the time (See Table 10 below). His correct inferences were shared equally between two perfective and two imperfective narratives, for which he received one point each. Similar to Omar, in narratives with imperfective aspect, Carlos did not draw more than one possible inference.

Table 10

Carlos's Pretest Results

Aspect	Inferences Possible	Inferences Made	Percent Correct
perfective	4	2	50%
imperfective	8	2	25%
combined	12	4	33%

Like Omar, Carlos never correctly referred back to antecedent 1 containing the imperfective phrase. Neither did he make any inferences that were worth two points on the pretest, showing that with imperfective narratives, Carlos only put down one of the possible reasons for the consequent. This would show that the imperfective aspect and highlighting thereof did not have any effect on the inference he made and that he did not understand the meaning of the highlighted imperfective aspect within the contexts of the narratives.

In one case, Carlos did put two possible answers, using the word “or” to connect them. For the imperfective narrative *The Snowman*, Julie does not finish making her snowman because she does not get the head and other facial decorations on. Carlos’s response was, “because of left over pieces or they had to go inside.” With the use of the word or, it shows that Carlos thinks of these two as separate reasons why the snowman was not finished. The first part of his response was correct, therefore he received one point. The second part, “they had to go inside” was not correct because it came from the filler statements. However, Carlos’s inference is not unreasonable to the question being asked. He drew an inference from a part of the narrative that was unexpected.

In the case of a perfective narrative, Carlos’s lack of elaboration again did not help him. With the story *Computer Troubles*, Jeff is disappointed because his notes are ruined. Carlos’s written response was, “because his project was ruened.” The addition of a few more words to his answer would have helped. If he said that the project was ruined from juice spilling on it, he would have had a clearer answer.

Carlos’s incorrect inferences on the pretest show that he is guessing using information from the filler sentences near the end of the story (See Table 11 below). I propose that Carlos is using the filler sentences because they are the most recent items he read before answering the question. However, one answer also showed that he was using his background knowledge to complete the inference. In the narrative *Unexpected Water*, the water dripping from the ceiling could be from the heavy rainfall on the roof or from the bath tub overflowing. In Carlos’s case, the tub overflowing is not an option because he had the perfective version, “He FILLED the tub with warm water.” In his response to

why was there water dripping from the ceiling, Carlos said, “because of a pipe.” The story mentions nothing about pipes. This is some evidence of an overreliance on background knowledge to the detriment of his reading comprehension (McCormick 1992; Dewitz & Dewitz, 2003).

Table 11

Carlos's Pretest Answers

Narrative	Aspect	Inferences From...	Inferences Made
1	perfective	filler	0
6	imperfective	filler	0
8	imperfective	filler & antecedent 2	1
2	imperfective	antecedent 2	1
7	perfective	antecedent 2	1
3	perfective	background information & antecedent 2	1
5	perfective	background information	0
4	imperfective	consequent	0

During the pretest, Carlos made no comments as Omar did, such as noticing the colored verbs or noticing that the question asked always went along with the focal statement.

Instruction

After the first day of instruction, the students had homework in which they were to write two pairs of sentences. The first pair of sentences was to contain the

imperfective **WAS RESTING**, and an accompanying sentence. The second set of sentences was to contain the perfective **RESTED**, and an accompanying sentence. In his homework, Omar showed some understanding of the difference between aspects. He wrote the following imperfective sentence pair: “Omar was resting in bed. Then Baylee the dog waked him up.” This sentence pair shows that he apparently understood imperfective to be an incomplete action because the second sentence describes something that happened in relation to the first and interrupting it. His understanding of the perfective though, is not as clear: “Omar rested while Baylee took nap. Then they wake up.” Because his second sentence is nearly the same in both the perfective and imperfective pairs, it is difficult to tell whether or not he understood that perfective is a complete action and imperfective is incomplete.

Carlos’s homework sentences show a clearer understanding of the perfective and imperfective aspects. His imperfective sentence pair was, “Carlos was resting while a dog came and bit his leg. Then he cried.” The dependent clause of his first sentence is related to Carlos being asleep at the time, and then being interrupted by the dog. His perfective sentence pair, “Carlos rested while his mom cooked. Then they ate supper,” shows that the dependent clause, “while his mom cooked,” is an unrelated event to “Carlos rested.” He has made the distinction that imperfective will be an ongoing event then something occurs that is related to it, and that perfective aspects will be more like a string of unrelated events.

On the fourth day of instruction, the students were working on independent practice of making inferences from a text. Both boys chose to read the book *The Garden*

of *Abdul Gasazi* (VanAllsburg, 1979) in which an ending inference shows that the magician Gasazi turned Fritz the dog into a duck. Omar had difficulty on this day. After Omar was done reading the book, he believed that Gasazi did *not* turn the dog into a duck. After leading him through the clues in the text several times, Omar was able to see that the magical transformation really did occur, but only after significant teacher guidance.

Carlos also chose to read the book *The Garden of Abdul Gasazi* (VanAllsburg, 1979), but did not need as much guidance as Omar in making the correct inference. In fact, Carlos understood the inference, and he only had trouble using the contents of the book to explain how he knew the magician really did turn the dog into a duck. With a little prompting from me, such as, “Reread this page to see if it helps you explain it better,” he was able to justify the inference he made with adequate detail. Carlos participated well in the instruction and showed his understanding of the concepts of aspect and inference making.

Posttest

In this section I will briefly discuss the results of the students together, and then each student individually. The interpretation of the results follows in the same order.

Posttest Results - Overall

The results of the posttest were mixed, with one student improving the number of inferences made, and one student making fewer inferences than on the pretest. Table 12 shows that there was no improvement made in making inferences from antecedents 1 and 2, whether the narrative aspect was perfective or imperfective. Table 12 compares the

inferences made from different parts of the narratives between the pretest and the posttest.

Table 12

Inferences Made From Different Parts of Narratives: Comparing Pretest and Posttest

Narrative parts	Number of inferences made on the	
	Pretest	Posttest
Background knowledge	0	1
Background information	3	1
Antecedent 1	3	3
Antecedent 2	8	8
Filler	5	2
Consequent	1	0
Inference drawn from outside text	0	1

There was little improvement made in making inferences from antecedent 1 in imperfective narratives. Only one of the two students used antecedent 1 appropriately to make an inference on the posttest. Despite instruction in the meaning of imperfective aspect, the students only improved by one inference, as seen in table 13.

Table 13

Inferences Made From Imperfective Antecedent 1 Aspect

Test	Inferences	Inferences possible
Pretest	0	8
Posttest	1	7

Omar's Posttest Results

Omar's posttest results do show improvement, despite his apparent confusion during the instruction. As seen in Table 14, he scored seven out of thirteen on the posttest for a percentage of 54%, meaning he made seven out of thirteen correct inferences. By comparing the pre and posttest data we can see that Omar has some evidence of learning. He is making successful inferences more often.

Table 14

Omar's Inference Results: Pretest and Posttest

Test	Inferences	Percent Correct
Pretest	4	36%
Posttest	7	54%

However, most of Omar's correct inferences came from narratives with perfective highlighted verbs as seen in table 15.

Table 15

Omar's Posttest Inferences

Aspect	Inferences Made/Inferences Possible	Percent Correct
Perfective	4/5	80%
Imperfective	3/8	38%

Omar's responses show that he usually (5 out of 7 times) drew his inference from antecedent 2, whether the narrative had an imperfective or a perfective aspect in antecedent 1.

Table 16

Omar's Posttest Answers

Narrative	Inferences From...	Points Earned
11 perfective	antecedent 2	1
12 imperfective	antecedent 2	1
13 perfective	antecedent 2	1
14 imperfective	antecedent 2	1
15 perfective	antecedent 2	1
9 perfective	antecedent 1	1
10 imperfective	antecedent 1	1
16 imperfective	not from text	0

Despite Omar's improvement overall in making inferences, what he is not seeing is that in the narratives with imperfective verbs, there might be more than one reason why an event occurred. This could be because he is not fully understanding the imperfective aspect or that he has been conditioned to only put down one right answer in his school experiences.

Carlos's Posttest Results

Carlos's results on the posttest, on the other hand, are surprising when considering how well he did during instruction. He did about the same on the posttest as on the pretest with only 27% correct (See Table 17).

Table 17

Carlos's Inference Results: Pretest and Posttest

Test	Inferences Made	Percent Correct
Pretest	4	33%
Posttest	3	27%

All of the inferences that Carlos did make correctly were from imperfective stories (See Table 18 below), however, he did not draw any of those correct inferences from antecedent 1 (See Table 19 below).

Table 18

Carlos's Posttest Inferences

Aspect	Inferences Made/Inferences Possible	Percent Correct
Perfective	0/4	0%
Imperfective	3/7	43%

Table 19

Carlos's Posttest Answers

Narrative	Aspect	Inferences From...	Points Earned
9	imperfective	antecedent 2	1
11	imperfective	antecedent 2	1
15	imperfective	antecedent 2	1
12	perfective	background information	0
14	perfective	background information	0
13	imperfective	filler	0
16	perfective	filler	0
10	perfective	antecedent 1	0

All of Carlos's correct responses on the posttest came from the second antecedent and imperfective narratives. The imperfective narratives should have indicated to him that antecedent 1 was an incomplete action and that he could also use it as one reason for the consequent. For example, in the narrative *Smelly Food Preparation*, Sandy "WAS

COOKING” dinner in a pot. She left the pot unattended and began talking with Kate who was grilling burgers. Later the friends smell something burning. The question was, “Why was there the smell of something burning?” to which Carlos wrote, “Because they left the burgers there and the person who was making it was talking with somebody.” Carlos also could have answered that Sandy’s dinner was burning, but he did not remember that, even though “WAS COOKING” was highlighted. Again, because of academic conditioning, perhaps antecedent 1 was activated, but because of the tendency to put down one response, Carlos only mentioned the burgers.

In fact, only one of his answers came from the first antecedent on the whole test (see table 19). However, Carlos made other various types of errors as well. As on his pretest, Carlos continued to use the filler statements to answer the questions on two narratives, rather than using antecedent 1 or 2. His answers in these cases did not answer the questions given because he does not explain his thinking thoroughly. For the narrative *The Science Project*, Brendan is buying some items to complete his project. In the imperfective version, Brendan WAS GETTING the glue when he bumped into someone. The question asked, “Why was there no glue in his shopping bag?” Carlos’s response was, “because he was having free time.” This answer was from the filler statements, but has no relation to what happened in antecedent 1 or 2. If he had elaborated a bit more from this filler statement, he may have made a causal link back to one of the antecedents.

Interpretation of Posttest Results

Overall interpretation of posttest results. There was minimal improvement from the pretest to the posttest. The lack of improvement mostly occurred because one student improved in making inferences, while the other student did about the same. Also, there was only an improvement of one inference using antecedent 1 in an imperfective narrative. The use of antecedent 1 could show that the student has effectively understood the aspect instruction, and has been able to apply it to the context of a narrative. Because the students have rather different results, I will interpret the results of the posttest more in depth individually.

Interpretation of Omar's results. Based on the data in Table 15, Omar was more successful with narratives containing perfective aspect. Part of the difference in success between perfective and imperfective narratives can be attributed to the fact that there are more inference possibilities with imperfective narratives. Where there was more than one possible cause for the inference, such as when antecedent 1 is imperfective, Omar was only likely to put down one possibility, rather than both. So with imperfective narratives, Omar was likely to make only one inference, rather than two, immediately decreasing his percentage in imperfective narratives to 50%. However, the perfective narratives may have been easier for Omar because the student realized that because that action is complete, it usually shuts out the possibility that an inference could be made from the first antecedent. He assumed then that the only possible answer to the inference question would have to come from the second antecedent.

Despite this, I do think that Omar learned that the aspect of the verb has some importance to the narrative. Evidence of his learning showed when Omar reached *The Tooth* narrative. He was reading along and he pointed out the highlighted verb to me, which was in blue on his posttest, and said, “This is incomplete. I just remembered.” He knew that the highlighted verbs were supposed to help him in some way.

Despite this, he initially did not answer the question in the expected way: “The tooth fall out.” Immediately after he wrote this I asked, “Why did his tooth fall out?” and Omar then added onto his written answer, “he hit it on desk.” However, because this narrative is imperfective, his tooth also could have fallen out because, “Jose **WAS EATING** a delicious beef jerky.” Omar only picked up on the second antecedent, as the cause of his tooth falling out.

While it is fairly clear that Omar understood how to recognize complete versus incomplete actions when they are highlighted within narratives, it is not clear that Omar understood that those verbs indicate a certain inference, or that when the verb is imperfective, there could be more than one causal link. His answer about *The Tooth* shows that while he has learned the information about complete versus incomplete actions, he has not synthesized that information to use it to his benefit in reading comprehension.

Omar’s responses on the posttest show that he usually (5 out of 7 times) drew his inference from antecedent 2. It is hard to say whether this is because it was the most recent item in his brain or because he was interpreting incorrectly that the imperfective and perfective antecedents have the same meaning. I propose that the reason for his great

improvement is that he was making guesses on the pretest and was adjusting to the format of the test in the posttest.

Interpretation of Carlos's results. Carlos did not make any improvement in making inferences from pretest to posttest. He, in fact, did worse. I would first like to address this student's behavior during the posttest. First, by watching him take the test, I could tell that he had not read each narrative twice. Although I was not timing him, it did not take him long enough to read each narrative twice. I had gone over the instructions of the test with him, which included reading the narratives twice, and I also reminded him twice while he was working on the test to be sure to read each narrative a second time.

The other behavior I noticed in Carlos was that I could tell that he did not want me peering over his shoulder while he was writing his responses. However, I needed to see what he wrote, so I could organize my questioning for the posttest interview. Carlos is normally comfortable around me and this behavior was very unusual for him. Test anxiety could have affected his performance on the posttest as well.

All of Carlos's correct responses on the posttest came from the second antecedent and imperfective narratives. The imperfective narratives should have indicated to him that antecedent 1 was an incomplete action and that he could also use antecedent 1 as one reason for the consequent. This shows that Carlos does not clearly understand the difference between perfective and imperfective aspect. However, he also could have only put down one response because this is what he has been trained to do as a student.

Carlos also had errors related to vocabulary and his use of background knowledge on his posttest. In *The Accident-filled Afternoon*, Shelley is riding her bike when she

suddenly falls. The question asked, “Why did Shelley feel a strong bump?” His first answer was, “because it was hurting her,” but when I prompted him for more with that answer, he added, “the bump the bike fell on her.” The bump in this case though is a bump in the road as she goes over a pothole, not a bump on her body. Carlos may have been confused by the vocabulary used, or the type of bump, in the narrative. This example also shows that Carlos is using his background knowledge about bumps, rather than the context of this narrative, to determine the meaning of the vocabulary item.

Carlos’s poor performance on the posttest may have been caused by a number of factors: aspect confusion, his use of the filler statements in his short term memory instead of antecedents 1 and/or 2 in his long term memory, vocabulary, and inappropriate use of background knowledge. However, all of these factors also could be impacted by his not reading the narratives twice. By looking at Carlos’s responses to the interview questions, I gained a deeper understanding of the reason behind his successes and errors in the written responses.

Posttest Interviews

The posttest interviews were conducted immediately following each student’s posttest. I asked questions about what they were thinking both on questions they had answered correctly and incorrectly.

Omar’s posttest interview. I began Omar’s interview by asking him about the narrative, *Painful Cleaning Process*. In this imperfective narrative, there were two possible answers: Nicole threw out her back from making the bed and/or from picking up the clothes. Omar’s written answer did not infer either one of these: “She was slob latly

so she didn't do much." I asked him, "Was there anything specific that she did that made her throw out her back?" He immediately said, "She was picking up clothes from the thing so maybe she didn't do it for a very long time." While Omar's written answer did not show his inference, the response from the interview shows that he did infer one of the correct responses. Because he did not verbalize this in some way without my prompting however, I did not count his written response as correct.

I also discussed the perfective narrative *The Science Project* with Omar because he had made a correct inference. He responded the same way orally as he did in his written answer when I asked him about his thinking. I followed up with the question, "...did this red verb help you at all?" He replied with, "I really didn't see it." It's interesting that this student, who noticed and asked about the colored verbs during the pretest, now says that he didn't see the verb. I would have liked him to be able to explain why the perfective verb helped him make the inference, and so I asked him a more specific question later on the delayed posttest interview.

A side comment Omar made at the end of the interview was, "This was pretty easy from the last one." He meant that the posttest had been easier than the pretest. What Omar didn't know was that the Flesch Kincaid reading level for this set of narratives was slightly higher than the pretest narratives.

Carlos's posttest interview. I began the interview by discussing *The Science Project* in which Carlos had incorrectly used filler information for his written answer. For the narrative *The Science Project*, Brendan is buying some items to complete his project. In the imperfective version, Brendan **WAS GETTING** the glue when he bumped

into someone. The question asked, “Why was there no glue in his shopping bag?” Carlos’s response was, “because he was having free time.” The antecedents of this imperfective narrative were:

9 Antecedent 1: Brendan **WAS GETTING** the paste.

10 Antecedent 2: Suddenly he bumped into someone.

I asked what he was thinking about when he answered the question, “Why was there no glue in his shopping bag?” He responded with,

Well I was thinking because he well, he didn’t get the glue because when he was like on his way he was having like free time and then when he ran into that person the glue must of felled out.

When Carlos elaborated upon his answer, he did refer back to antecedent 2 of the story, which shows that if he had written a bit more, he would have made this causal link.

However, antecedent 1 shows that Brendan never actually got the glue. So I confirmed Carlos’s thinking by asking, “So did he get the glue?” and Carlos responded with, “Yeah. But it fell out.”

One reason he only wrote one response is probably due to academic conditioning. Another reason comes from my knowledge of this student after being his teacher for two years. His oral language is much stronger than his written language; he did not particularly care for writing and would often take “short cuts” in his written responses for homework or other written tasks. His answers in class often would not show everything that he was thinking, and the same thing happened on the posttest.

Carlos had used antecedent 2 in *The Science Project* to make an inference, which was his tendency on the pretest and posttest. Also, not paying attention to the aspect of antecedent 1, led him to make an incorrect inference. Carlos showed more of his tendency to ignore the aspect of antecedent 1 even in explaining a correct answer. I decided at this point of the interview to jump to another story, *Painful Cleaning Process*, to discuss the aspect of antecedent 1, which was perfective, “Nicole MADE the bed and felt a slight twinge in her back.”

Researcher When you look at this verb in red, does that help you at all to answer the question?

Carlos Yeah.

Researcher How come?

Carlos Because like it says Nicole made the bed and felt a slight twinge on/in her back. And that’s like a really important word in it...sort of.

Researcher Is it complete or incomplete?

Carlos Um...Incomplete.

Researcher She made the bed.

Carlos Oh, complete.

This exchange proves Carlos has clear confusion in regards to aspect as he wavers between complete or incomplete in his responses. Unfortunately there are only two possible answers to the question, “Is it complete or incomplete?” and he guessed wrong. Also, the fact that he can only vaguely explain why the red verb is important, and says

nothing about how it is a complete action on his own shows he has not noticed the perfective aspect or seen how it can help him make an inference. From this exchange I directed Carlos back to *The Science Project* to see if he could identify the meaning of the aspect and make the correct inference from antecedent 1, “Brendan **WAS GETTING** the paste.”

Researcher “Was getting.” Is that complete or incomplete?

Carlos Incomplete.

Researcher So, if Brendan was getting the paste, did he get it?

Carlos No.

Researcher No. So then when he came home, why was there no glue in his shopping bag?

Carlos Because he didn't get it!

Researcher Because he didn't get it! Exactly. So does that help you?

Carlos Yeah.

Researcher Why does it help you?

Carlos Because it says ‘was getting’ and it gives you like a huge hint.

Carlos's negotiation of meaning of the imperfective and perfective aspects seems to be cleared up after we held this conversation. Unfortunately, during instruction there were no strong indicators that he did not understand this concept. A short narrative practice during instruction may have helped Carlos clear up his confusion before the posttest.

Posttest interview summary. Through the posttest interview I was able to clarify the thinking of both participants. In Omar's case, it clarified understanding of the narratives and the inferences he made, particularly where his written responses had not shown the correct inference. With Carlos, the interview helped me to explain perfective and imperfective aspect within the context of narratives. This step was a form of reconsolidation of the explicit comprehension model. Without the interview, Carlos would most likely have remained confused by the time of the delayed posttest. The interview ended up being an important step in Carlos's learning process.

Delayed Posttest

Delayed Posttest Results – Overall

The results of the delayed posttest show one student got about the same number of inferences correct, and one student improved. The students relied even more upon antecedent 2 to draw their inferences than they had on the pretest and posttest. Consequently, the students did not use filler statements as much or background information to draw their inferences (See Table 20).

Table 20

Inferences Made From Different Parts of Narratives: Comparing All Tests

Narrative parts	Number of inferences made on the		
	Pretest	Posttest	Delayed Posttest
Background knowledge	0	1	0
Background information	3	1	0
Antecedent 1	3	3	0
Antecedent 2	8	8	13
Filler	5	2	3
Consequent	1	0	0
Inference drawn from outside text	0	1	0

The students also did not make any inferences using antecedent 1 in imperfective stories (See Table 21). This either shows that they did not fully understand what the imperfective aspect means within a narrative, or that they have become accustomed to the test, and were unlikely to see any other inferences, besides the one drawn from antecedent 2. Again for those imperfective narratives, there are two inferences possible.

Table 21

Inferences Made From Imperfective Antecedent 1 Aspect: Pretest - Delayed Posttest

Test	Inferences	Inferences possible
Pretest	0	8
Posttest	1	7
Delayed Posttest	0	6

Omar's Delayed Posttest Results

On the delayed posttest, Omar's percent correct of inferences made remained about the same with 54% correct. Omar's responses showed the same pattern as his posttest with most correct inferences being drawn from antecedent 2 of the story. Omar did not make any inferences from antecedent 1, showing that he does not realize that an imperfective verb usually should lead him to have more than one possibility for the consequent. Table 22 shows a comparison of Omar's three tests and his percent of correct inferences on each.

Table 22

Omar's Results: Pretest through Delayed Posttest

Test	Inferences Made	Percent Correct
Pretest	4	36%
Posttest	7	54%
Delayed Posttest	6	55%

Omar relied greatly upon antecedent 2 to draw his inferences, despite the use of the imperfective aspect in four of the narratives, as seen in Table 23. He used antecedent 2 seven out of eight times on the delayed posttest (See Table 24), compared to the posttest where he used antecedent 2 five out of eight times.

Table 23

Omar's Delayed Posttest Inferences

Aspect	Inferences Made	Percent Correct
Perfective	3	75%
Imperfective	3	43%

Table 24

Omar's Delayed Posttest Answers

Narrative	Aspect	Inferences From...	Points Earned
17	imperfective	antecedent 2	1
18	perfective	antecedent 2	1
19	imperfective	antecedent 2	1
20	perfective	antecedent 2	0
21	imperfective	antecedent 2	1
22	perfective	antecedent 2	1
24	perfective	antecedent 2	1
23	imperfective	filler	0

Carlos's Delayed Posttest Results

Like Omar, Carlos had a higher percentage of inferences drawn correctly from perfective narratives. However, it is important to note that this is largely due to the fact that most imperfective stories have two possible inferences, and the students usually only wrote down one inference, which was from antecedent 2. Only recording one inference on imperfective stories will automatically give the student 50% or less correct on the number of inferences made. Tables 26 and 27 show the percentage difference between perfective and imperfective stories for Carlos, and where he drew his inferences from.

Table 26

Carlos's Delayed Posttest Inferences

Aspect	Inferences Made	Percent Correct
Perfective	3	60%
Imperfective	3	43%

Table 27

Carlos's Delayed Posttest Answers

Narrative	Aspect	Inferences Made From...	Points Earned
17	perfective	antecedent 2	1
19	perfective	antecedent 2	1
20	imperfective	antecedent 2	1
21	perfective	antecedent 2	1
22	imperfective	antecedent 2	1
24	imperfective	antecedent 2	1
18	imperfective	filler	0
23	perfective	filler	0

Interpretation of Delayed Posttest Results

Interpretation of Omar's results. Omar did not make a correct inference in two stories, *The Lost Ring* and *A Plane with Pain*. In *The Lost Ring*, Omar made an unexpected inference that is not necessarily unreasonable. However, his response does show that he is continuing to not notice antecedent 1 and use antecedent 2 as the reason for the consequent, "Where had Megan's ring gone?" In the perfective version of *The Lost Ring*, the ring should be on the window sill, which was mentioned earlier in the narrative.

- 11 Antecedent 1: Megan **TOOK** off her ring when the doorbell rang.
- 12 Antecedent 2: It was just a salesman, so she quickly dismissed him

and began roughly kneading the dough.

Because Omar is paying close attention to antecedent 2 however, his response to “Where had Megan’s ring gone?” was “The salesman took it.” Omar and I discuss this narrative more during the delayed posttest interview.

In a *Plane with Pain*, Omar has a vague response that seems to come from the filler statements rather than the antecedents. As will be discussed later, Carlos also had trouble with this particular narrative.

John’s favorite hobby was putting together model airplanes. On the weekends he would sit for hours pouring over his latest model. He had a new one to begin today of a P-3 Orion. He grabbed a scissors from the table and **WAS CUTTING** out all of the plastic model pieces. While slowly leaning against the shelves to support his back, John lost his balance. Immediately, he started worrying about the tiny pieces. They would be all over the floor and impossible to find. He felt a strong pain.

What caused the pain when John lost his balance?

Omar’s written response was, “Because fall on the ground. (?)” Obviously, the question mark he added shows he was uncertain about his answer. It is difficult to tell from this written response what fell on the ground, John or the pieces, but either way, this response seems to come from the filler statements. The pain could be caused in this case by either the scissors because he **WAS CUTTING** out the plastic model pieces or from the shelves against his back. I think that this inference error was caused by not only a clarity issue within the narrative, but also perhaps because Omar has never made a model airplane

before, and therefore it is not a part of his background knowledge. Omar and I discussed this narrative further in the delayed posttest interview, when even after reading the story a third time aloud to me, he still needed a lot of guidance to make either one of the correct inferences.

Interpretation of Carlos' results. Carlos's improvement in making inferences could have occurred from having had more independent practice on his own, or from having less anxiety than the posttest. However, I cannot help but think that most of Carlos's improvement is due to his careful reading of the narratives on the delayed posttest in comparison to the posttest. To ensure that Carlos read the narratives twice on the delayed posttest, I had him read it once to himself, and then read it aloud to me the second time. This ensured that when he didn't know a word, I could help him with it as he was reading. Table 28 shows Carlos's reading accuracy and reading rate on the delayed posttest, although I do not have similar data from the pretest or posttest for comparison.

Table 28

Carlos's Reading Accuracy and Words Read Per Minute on the Delayed Posttest

Test	Accuracy	Words Read Per Minute
Delayed Posttest	97%	89

The Flesch Kincaid grade level average of these narratives was 3.66 which gives this test an independent level in accuracy of at least 96% and a words per minute rate of at least 85 using the DRA2 (Beaver & Carter, 2006) measures. Carlos's accuracy and

reading fluency, or words per minute rate, is at the independent level for this set of narratives. The collection of this data showed that the narratives on the delayed posttest were not too difficult for Carlos to read on his own. Because he could read and make inferences well on the delayed posttest, earlier he should have been able to read and make inferences from the posttest equally well.

There is still a pattern with Carlos's correct answers, however. All of his correct inferences came from antecedent 2, and he never wrote more than one possibility for the cause of the inference coming from antecedent 1, therefore his accuracy on imperfective narratives remained the same as the posttest at 45%. His inference accuracy on perfective narratives jumped back up to 60%, well above his pretest and posttest levels. Although he has made successful inferences, he does not see that in certain situations there maybe more than one cause for the consequent.

Like his performances on the pretest and posttest, some of his incorrect inferences were made using the filler statements. On one occasion, during his reading of *After School Duties*, Carlos wrote his response and I prompted him for a more specific answer. However, he said he could not remember what the story had said. The second incorrect inference was made with the story *A Plane with Pain*, which Omar also had problems with. Carlos's answer however, did not make sense with the question, "What caused the pain when John lost his balance?" Carlos wrote, "That all pieces were all over the place and never find them." Losing pieces to a model airplane might cause emotional pain, but most fifth graders would not make this sort of a connection and would only think of pain as being physical. The difficulties that both boys have had with this narrative could show

that they do not have any background knowledge, and hence they both found the story difficult. This narrative would need some revision, or to be replaced, in a future study.

Delayed Posttest Interview

In this section I will discuss the interviews held with the students immediately following their delayed posttests. In these interviews, I addressed why the students were not using antecedent 1 as the consequent in imperfective narratives.

Omar's delayed posttest interview. In the delayed posttest interview, Omar showed some confusion about the meaning of the perfective and imperfective verb phrases. I asked him, "Is this verb complete or incomplete?" three times from three different narratives, and Omar showed confusion every time he initially answered. For example, with the story *The Lost Ring*, this was our exchange:

Researcher Now look at this verb. Is that complete or incomplete?

Omar Incomplete. Complete.

Researcher Megan took off her ring.

Omar Complete.

There were two other exchanges that were very similar to this, where Omar eventually seems to know whether it is complete or incomplete, but his initial guess was incorrect. If he does not understand the meaning behind the aspects of antecedent 1, then it would make sense that he chose not to use antecedent 1 for his reasoning of the consequent, and hence relies heavily on antecedent 2 in his responses.

From the posttest, this pattern had become clear and I planned to ask Omar about a narrative in which he did not have all possible answers to an imperfective narrative.

More evidence of Omar's confusion with aspect showed in the conversation about *The Reader*. In this narrative, Amy was reading in her room and **WAS PUTTING/ PUT** her bookmark in to feel the breeze at the window. When she turns around, she has lost her place in the book. Omar's version of this story was imperfective, or "She **WAS PUTTING** a bookmark in her book."

Researcher So did she put her bookmark in the book?

Omar Yes.

Researcher What do you think? She was putting a bookmark in her book.

Omar Yes.

Researcher So if she put it in her book, it must be the...

Omar Wind.

Researcher Right. I would say that this one it could also be that she didn't quite put her bookmark in, because it's incomplete. So it could be that she lost her page because she didn't put her bookmark in.

Omar Not very well.

Researcher Not very well. Exactly.

As evidenced from our conversation, Omar was convinced that the bookmark was placed in the book. I had to go on and explain to him that the imperfective verb might show that she didn't quite get her bookmark in the book. Omar is not noticing or recognizing that the imperfective verb phrase could be used as an antecedent. I think this is because his learning about aspect was not practiced in exactly the manner that the narratives use

aspect. Unfortunately, any learning about aspect that he may have had, which did not clearly manifest itself during instruction, did not transfer over to these narratives.

For Omar's other incorrect inference in the story *The Lost Ring*, he had some problems with vocabulary.

Researcher So, she took it off. If she took it off, where did she put it?

Omar In the kitchen window.

Researcher Right. So where's the ring?

Omar On the kitchen table.

Researcher On the kitchen table?

Omar ...Sill.

Researcher Right, on the window sill. Right. Do you know what a sill is?
(Omar shakes his head, no) You know the edge of the window where you could like put say a cup or you could set your keys?
(Researcher gestures toward a nearby window sill) That's a window sill. So this is complete right? So where is her ring?

Omar In the window sill.

The window sill is an important concept to the story itself, and Omar's understanding of the word may have impacted his choice to say the salesman took the ring, rather than some other cause. Omar did not ask me about other vocabulary items from other narratives during the test.

Omar's performance on the delayed posttest and interview suggest that instruction did not help him understand imperfective aspect. Omar was able to figure out the pattern

that antecedent 2 is always a correct inference, and because of this he basically ignored the aspect of antecedent 1. Vocabulary and background knowledge impacted his ability to make correct inferences as well.

Carlos's delayed posttest interview. Carlos's interview showed that in at least two cases, Carlos's written responses did not completely show his thinking. He had more to explain which would have showed correct inference making. For example, I asked Carlos about *After School Duties*, since I had prompted him for more with his written answer, but he said he couldn't remember. In this imperfective narrative, Sam is in trouble for playing on the family computer and for not taking out the dog.

Researcher What were you thinking about when you answered this one? Why was Sam in trouble again?

Carlos Because like after school he had like after school behavior, it was really...like he was being bad after school and his dad was probably mad and stuff at him and then he thought I'm going to be in even in more trouble because I didn't take out the dog.

In his written answer, Carlos had not mentioned the dog, but if he had, he would have had another correct inference. Carlos had a similar response when I asked him about *The Cleaning Lady*, in which in the imperfective version, Shirley sneezes from the dust and the cat. Carlos's written response only mentioned the cat. I asked Carlos, "Were there any other reasons why she might sneeze?" and he immediately replied, "Oh! *And* the dust." This additional inference was not written on his sheet. Instead of receiving one point, he could have received the full two points by writing more. By having the

elementary aged subjects share their responses orally, the researcher may get a better idea of their inference making abilities.

I also discussed the highlighted verb being complete or incomplete with Carlos, and how it might help the reader. The imperfective verb for the story *After School Duties* was, “Sam **WAS TURNING** off the computer.” Carlos’s response to my question shows that he has eliminated some of his confusion about the meaning of the imperfective because he realized that Sam was in trouble for more than one thing.

Researcher Okay, so let’s look at the verb. Is this complete or incomplete?

Carlos In.

Researcher Incomplete, that’s right. Does that help you answer the question?

Carlos Yeah, sort of.

Researcher How come?

Carlos Because... when his dad was coming he was like, uh-oh, and then he turned it off.

Researcher Uh huh. Exactly. So, he was in trouble about the dog, right?

Carlos Yeah.

Researcher Was he in trouble about anything else?

Carlos Yeah.

Researcher What else was he in trouble about?

Carlos After school behavior.

Researcher Well yep, the after school behavior...

Carlos Oh *and* turning off the computer.

Carlos needed quite a bit of guidance to draw the conclusion that Sam was in trouble about the computer *and* the dog. Later, Carlos admitted when discussing *The Cleaning Lady*, that he had not looked at the highlighted imperfective verb very carefully.

Researcher You said because a cat was by and she had allergies and sneezed.

Were there any other reasons why she might sneeze?

Carlos Oh! *And* the dust.

Researcher Yes! How do you know?

Carlos Because she was dusting.

Researcher She was dusting. Exactly, take a look at the verb.

Carlos Oh, I didn't look at that very careful.

Not only did Carlos not noticing the highlighted verbs, his reliance on antecedent 2 for his responses also showed that he is not thinking about the meaning of the verb in antecedent1 without guidance.

Individual Summaries

Omar's Summary

Omar's inferences improved over time with imperfective narratives in particular, with perfective narratives staying about the same, even though he rarely drew inferences from the first antecedent with the aspect manipulation itself. However, there is a significant gap between Omar's inference success between perfective and imperfective narratives, with perfective narratives 77% success rate overall and imperfective narratives averaging a 32% success rate. These comparative results can be seen in Figure 1.

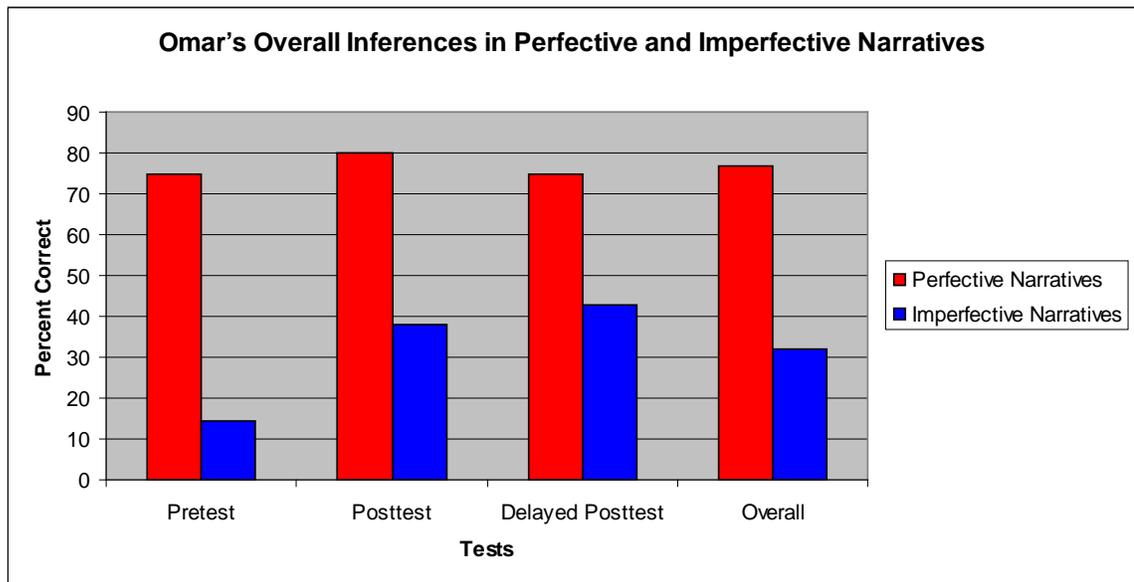


Figure 1: Omar's Overall Inferences in Perfective and Imperfective Narratives

The discrepancy between the perfective and imperfective narratives is due to the fact that nearly all the imperfective narratives had two possible answers, and usually Omar only wrote down one possible inference, so the percentage of inferences in imperfective narratives is based on twice the amount of inferences. The inferences he made almost all came from antecedent 2, showing that the aspect of antecedent 1 did not affect his inference making. Based on this information, and Omar's obvious confusion about aspect, revealed in the delayed posttest interview, I conclude that to Omar inference instruction made more of a difference to his improvement than aspect instruction. I also think that Omar learned how to take the test, and knew what parts of the narratives to pay attention to in order to make a correct inference.

Carlos's Summary

Carlos's test results also show improvement in making inferences, however, for this particular student, his careful reading of the narratives on the delayed posttest also helped his inference making. If the results from his posttest are eliminated due to the student not following the test directions, his performance in overall inference-making improved on both perfective and imperfective narratives from pretest to posttest, as shown in Figure 2.

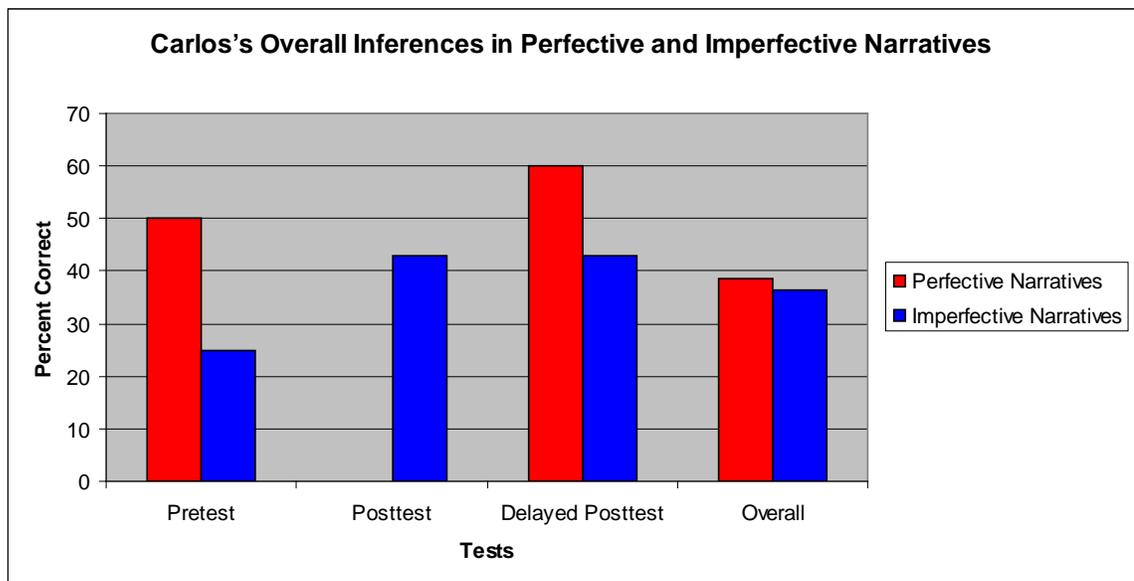


Figure 2: Carlos's Overall Inferences in Perfective and Imperfective Narratives

Again, without the results of the posttest taken into consideration, Carlos was more accurate overall drawing inferences in perfective narratives than imperfective narratives. This is because in imperfective narratives there is usually more than one correct response; so the percentage of inferences in imperfective narratives is based on

twice the amount of inferences. Carlos only put down one possible inference in his responses. Also, his correct responses always came from antecedent 2, showing that the aspect presented in the narrative did not impact his decision. While Carlos could identify perfective and imperfective verbs in conversation, he did not apply his learning about aspect on his own.

Overview of Results of Both Subjects

Both Carlos and Omar showed improvement in their inference making in imperfective narratives from pretest to delayed posttest. Figure 3 below shows this improvement, but also the lack of improvement from pretest to posttest due to Carlos's poor performance on the posttest. These results are only based on the students' written answers, not on the information gleaned of their understanding from the interviews.

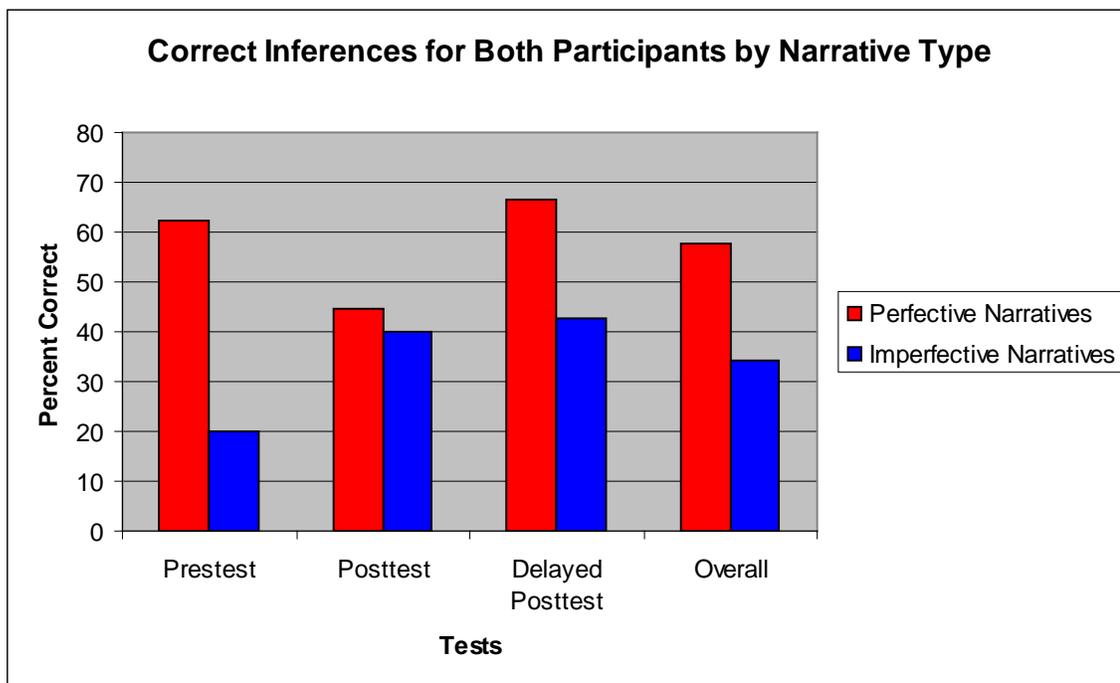


Figure 3: Correct Inferences for Both Participants by Narrative Type

It's not clear that the improvement in making inferences is a direct result of the explicit comprehension model of instruction. While I think that using the explicit comprehension model of instruction to teach inference making was useful to the students in the long run, I can't help but think that the students simply learned how to take the test more effectively, rather than how to make inferences. One of the reasons for this rationale is because both subjects relied so heavily on antecedent 2 to draw their inferences. Also, one student started voicing that he noticed the patterns of the test before the pretest was even over.

The way to see whether the explicit instruction model of instruction has truly helped their inference making would be use genuine examples of literature. Since this study was also examining the use of aspect to determine certain inferences, it would be very difficult to find multiple examples of literature containing such specific aspects as used in this study, to lead to a particular inference. In other words, the format of these tests is not the best for determining whether inference instruction has made an impact.

It also appears that aspect instruction did not make much of a difference for similar reasons. As stated earlier, the students heavily relied on antecedent 2 to draw their inference, whether antecedent 1 was perfective or imperfective. When the narrative contained a highlighted imperfective aspect, the students showed improvement in their ability to make a successful inference across the test measures, although the students did not tend to make inferences using the highlighted imperfective verb phrase itself (antecedent 1). This shows that the aspect instruction itself may have not made much of

a difference to their inference making because the students were not likely to use antecedent 1 to draw an inference.

These results seem to contradict Schramm's (1998) research that found imperfective aspects are more activated in the native reader's short term memory than perfective aspects. If the students were activating the imperfective more often, they would have used antecedent 1 more often to make correct inferences. It appears with the current study though, from the information gleaned from the interviews, that the students did not internalize the information from the instruction about the meaning of imperfective aspect, and treated all narratives the same, whether they were perfective or imperfective.

Because antecedent 2 was used correctly more often, this means that despite the highlighting of the imperfective verb phrase of antecedent 1, the students were not more likely to use it in their written responses. It might also show that despite instruction on the completeness of perfective versus imperfective actions, the students did not see how this could help them make a correct inference within the narratives. Figure 4 however, shows how often antecedent 1 was used on each test measure. The students were most likely to use antecedent 1 for a written response during the posttest, which was immediately after instruction.

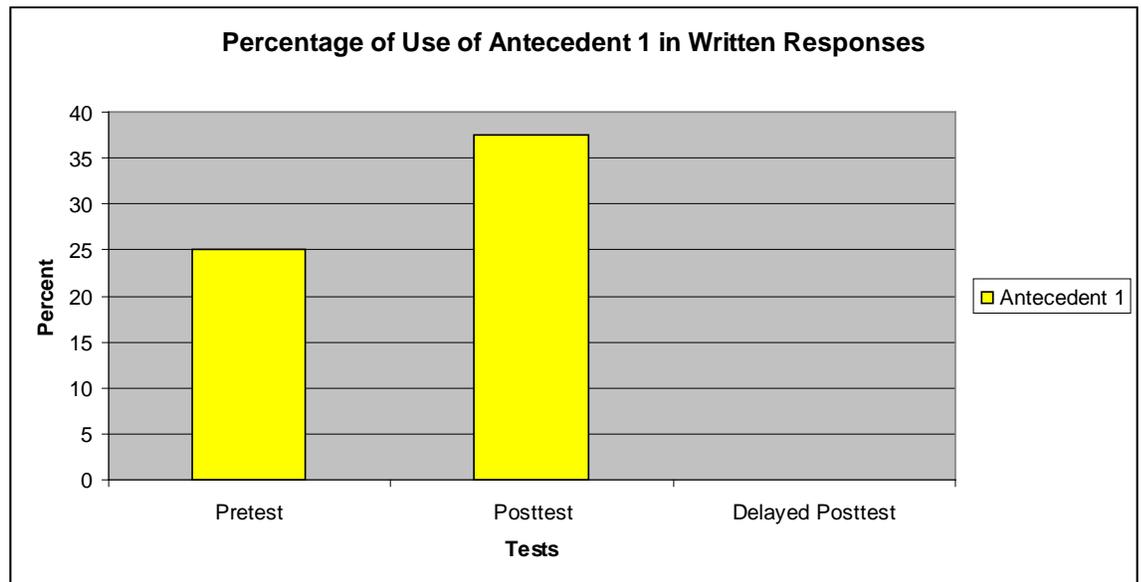


Figure 4: Percentage of Use of Antecedent 1 in Written Responses

The students used antecedent 1 most often in the posttest shows that their learning about the completeness of perfective and imperfective verbs may have had some immediate effects on their inference making. However, after a month when the delayed posttest was given, neither student used antecedent 1 to make an inference at all.

These results tend to align with Meidal's (2007) work in which highlighting the forms did help the adult ESL subjects to notice the forms, although it did not impact the subjects' abilities to make the correct inference, or interpret the meaning of the forms. It seems that even with instruction in aspect, the students were still struggling to negotiate the meaning of the perfective and imperfective verbs because they avoided using the key verb phrases of antecedent 1 in their inferences.

In the final section of this study, Chapter 5, I will recap the findings of this study, discuss its limitations, and provide ideas for future studies regarding aspect and making inferences with elementary ESL students.

CHAPTER FIVE: CONCLUSION

This research project asked the question: does explicit perfective and imperfective aspect and inference instruction improve students' abilities to make correct reading inferences and can these results be seen over time? Through a study of two fifth graders, improvements from pretest to delayed posttest were seen in inference making overall. This improvement was most likely due to explicit inference instruction, and the students learning how to use the format of the test to help them make an inference. Improvement in inferences was not due to aspect instruction because the students relied so heavily upon the second possible cause of the inference, or antecedent 2, regardless of the perfective or imperfective nature of antecedent 1. This shows that the students did not really distinguish between the meaning of the perfective and imperfective aspects.

This study aligned with Meidal's (2007) work that determined highlighting of a verb's aspect did not impact the subjects' abilities to make the correct inference, or interpret the meaning of the forms. Schramm (1998) found that the imperfective aspect was more activated in a native reader's short term memory than the perfective aspect. However, the current study showed that the perfective aspect was easier for non-native students to use for inference making, perhaps because the action was completed and therefore cannot be considered when making an inference.

There are several limitations to the current study involving the narratives. First of all, these narratives were designed with two specific learners in mind. I used language and vocabulary that I felt they would know and understand. Were this study to be duplicated, the researcher would need to look at the narratives closely with their own ESL students in mind, and use vocabulary and idioms that would be appropriate for their own learners.

Second, most of the imperfective narratives have more than one right answer, so the ratio of inferences from imperfective narratives to perfective narratives is nearly 2:1. Since the students in this study rarely wrote down more than one possibility, it was difficult to see results on the students understanding of the imperfective forms. However, there were a few imperfective versions of narratives, such as *Computer Troubles*, *The Lost Ring*, and *The Joker* where even though they were imperfective, there was only one inference to be made from the first antecedent. If more imperfective stories were written like these, the results for comparing understanding of perfective and imperfective forms would be even, a 1:1 ratio. If this format were used, the students would not be able to fall back on another inference within the story however.

Other revisions of the narratives may also be needed. At least one narrative required more than one inference when answering the question, such as *The Tooth* and *The Lost Ring*. In a future study, questions like this one should be revised so as not to require any inference but the one being sought from antecedent 1 or 2. Even though one student had a perfective version of the narrative and the other student had an imperfective version, there were a few narratives that neither student answered correctly. The students

informally took the pretest narratives that they had initially made an incorrect inference on again after the delayed posttest. Both subjects had trouble with *Risks of Running Late*, even after instruction and even though it was the second time they had seen that story. Two other stories, *Painful Cleaning Process* from the posttest and *A Plane with Pain* from the delayed posttest would also need to be changed or replaced because neither student made a correct inference from them.

One last revision to the narratives that I would suggest before the study is duplicated would be to add more filler sentences to the stories. Because of the dependency that the subjects showed using antecedent 2 so often in responses, this could mean that antecedent 2 is still in the subjects' short term memories and so they are more likely to remember it when answering the inference question. If more filler sentences were added, this could push antecedent 2 into long term memory creating the backward reinstatement inference needed for the inference question.

Another limitation of the current study is that the practice provided during instruction, particularly with regards to the perfective and imperfective aspects, was not directly related to the students' comprehension of a narrative. In other words, the lines of instruction for inference and aspect did not cross and intertwine with each other for a deeper understanding of aspect's effects on inferences. If the students practiced a narrative together before the pretest or during instruction, this may deepen the students' understanding of the meaning of the aspect of the highlighted verbs. In addition to this, some of the instruction should focus on the vocabulary used in the narratives. During the tests, some vocabulary items impacted the students' understanding of the narratives.

Before the tests are given, the difficult vocabulary items should be discussed, or definitions should be readily available for the students to use during the test.

There are also a few suggestions I would have for improving this study in regards to the administration of the lessons and the tests themselves. The first would be to record not only the interviews, but also the instruction itself. Being able to analyze the students' understanding of the instruction and the teacher's performance would have been beneficial to review afterwards. I would also consider having all the subjects read the story once to themselves and then read it aloud to the researcher the second time. I feel that this practice could have prevented the drop in Carlos's results on the posttest, giving him a much more consistent performance showing improvement.

Should this study be performed again, it would also be helpful to many students to eliminate the written answers and record their answers orally. In the posttest interviews and the delayed posttest interviews, both subjects expressed inferences that they had not written down. For ESL students in particular, this modification makes sense, being that written proficiency follows oral proficiency in language development.

My last suggestion for future research is that a comparative study be done between groups who receive instruction and groups who do not. The current study used only two subjects, so one cannot generalize the findings. As I looked over the results of this study, I could not help but think that perhaps these students just became better guessers as they grew accustomed to the format of the test. A comparative study could possibly eliminate this doubt. A comparative study could be varied in several different ways where one group receives just aspect instruction, one receives just inference

instruction, one receives both types of instruction, and a control group could receive no instruction. This type of study design could give very clear results about which type of instruction, if not both, are best for improving students' understanding of aspect and making of inferences.

More research is needed in order to present a strong case for teaching with an explicit comprehension model using the instructional pieces of modeling, guided practice, independent practice, and application (Duffy & Roehler, 1989; Dewitz & Dewitz, 2003) for ESL students. A study using this model in a consistent fashion over time is needed to show that its use could benefit ESL students, leading to higher comprehension, and better performance on high stakes standardized tests. Principals and school curriculum administrators should also strongly consider the model as a useful tool for their teachers to be trained.

My plan is to keep using the explicit comprehension model throughout the school year, and attempt to keep teaching aspect to my elementary students. Despite the results of this study, I believe both inference and aspect instruction are valuable to students and can lead to success through language awareness and better reading comprehension.

APPENDIX A
NARRATIVES

NARRATIVES

1. Risks of Running Late

It was late when Pat got up. She did not have time for breakfast so she grabbed some fruit from the kitchen counter. Pat rushed out the door to catch the bus. On her way, she **WAS EATING** / **ATE** the apple. The sidewalk was very bumpy from all the tree roots growing underneath it. Then Pat saw her friend Bonnie at the bus stop and this reminded her that Bonnie's birthday party was coming up soon. She would have to get her a present by the end of the week. Next thing she knew, Pat was stopped in her tracks in pain.

Why did Pat stop in her tracks in pain?

(Flesch Kincaid Reading Level 2.95)

2. Cleaning Day

Joe decided to clean his room. In the morning he picked up all his toys that were lying around. In the afternoon Joe thought he should clean the floor too. He found an outlet and **WAS VACUUMING** / **VACUUMED** the carpet. He decided to turn on some music. He continued to bop around his room, very pleased with himself. Joe thought he might as well do some dusting too while he was at it. Suddenly there was a knock on his bedroom door because Joe's father was upset about the noise.

What noise made Joe's father upset?

(Flesch Kincaid Reading Level 3.28)

3. Computer Troubles

Jeff always panicked when he should stay calm. He didn't like to get behind, so he always worked ahead. Jeff was working on a project about slavery. He **WAS SAVING / SAVED** his report, when his laptop suddenly froze. Frustrated, Jeff stood up quickly and knocked juice onto his notes. Mom always had a fresh supply of paper towels down in the kitchen. His mom was making pizza and it smelled great. When Jeff finally returned to his work, his heart sank in disappointment.

Why did Jeff's heart sink in disappointment?

(Flesch Kincaid Reading Level 4.03)

4. Dangerous Repair Jobs

Dad had noticed that a step on the stairs leading down to the basement needed to be repaired. The board on the top of the stairs needed to be nailed down again. So, on Saturday Dad worked on the stairs. He **WAS REPLACING / REPLACED** the board. The children had their blocks scattered all over the top of the stairs when the phone rang. Mom answered it, but it was for Dad. He had been expecting a call from an old friend of his. Racing up the stairs, Dad stumbled and started falling.

Why did Dad stumble?

(Flesch Kincaid Reading Level 4.0)

5. *Unexpected Water*

It was definitely time for baths. The children had played outside in the rain and were all muddy and cold. Mr. Duncan went upstairs to the bathroom. He **WAS FILLING** / **FILLED** the tub with warm water. Back downstairs while waiting for his kids, the heavy rainfall reminded him to have the hole in the roof fixed. Meanwhile his daughter was taking her time with putting her toys away. She knew it was bedtime soon and liked to stall. Right then, Mrs. Duncan came running into the kitchen to tell him that there was water dripping from the ceiling.

Why was there water dripping from the ceiling?

(Flesch Kincaid Reading Level 3.0)

6. *Bad Housework*

Rob and Alisha had a nice system going. Each day they split up the chores they had to do. Today, Alisha took care of the living room, and Rob was cleaning the kitchen. Rob **WAS WASHING** / **WASHED** the dishes. Alisha watered the plants and started putting fresh flowers in a special vase. She was thinking about what a terrible day she had had. Alisha had slept late, missed her bus, and was yelled at by her teacher. Suddenly there was a shattering noise.

What was the cause of the shattering noise?

(Flesch Kincaid Reading Level 3.64)

7. *The Disappointing Day*

That day at school, Alex's teacher told him that his late project had to be finished, otherwise he would miss recess the next day. This assignment was Alex's main job when he got home from school. He was sure it would take him quite a while. Alex found all the necessary materials and **WAS WRITING** / **WROTE** his report. In an hour or so, Alex started feeling sick, but he kept on working. A while later, his mom stopped in his room to ask him how it was going. Alex explained everything that was going on to his mom. That night, Alex had a basketball game, but he couldn't go.

Why could Alex not go to the game?

(Flesch Kincaid Reading Level 3.84)

8. *The Snowman*

Winter was Julie's favorite season. When the fresh snow started falling she decided to make a snowman. She rolled up two giant balls of snow and put one on top of the other. She **WAS PLACING** / **PLACED** the head on top when her dog, Max, ran up to her. Julie forgot about the corn cob pipe, button nose, and eyes made out of coal while Max danced around her legs. He was very excited to play in the new snow with Julie. She and Max were having such a fun time. It was time to go in for the night, but her snowman wasn't finished.

Why wasn't Julie's snowman finished?

(Flesch Kincaid Reading Level 3.0)

9. Movies or No?

Matt really wanted to go to the movies today. He had asked his mom days ago, and she had promised to let him know this morning. Matt had been checking his phone for a text all morning to see if she had said yes. She finally **WAS SENDING** / **SENT** the message. Just then the veterinarian called to tell her that he had just spoken with Matt, and that the old family dog, Mr. Boe, was not doing well. After that her boss had called to get an update of her project. Matt's mom thought about how balancing family and work can be very demanding. Meanwhile, Matt was feeling very depressed.

Why was Matt feeling so depressed?

(Flesch Kincaid Reading Level 3.7)

10. Allowance Money

Nick's parents would give him a \$1 allowance if he did all his chores. He usually would save up just enough to buy a new video game. Today he needed to straighten, dust, and sweep his room. Nick **WAS CLEANING** / **CLEANED** his room. Suddenly he heard the ice cream truck outside, so he made a run for it. His friends were outside playing soccer and he decided to join them. Nick was thrilled when he scored a goal. But the next day the thrill was gone when Nick opened his wallet at the video game store to find he did not have enough money.

Why wasn't there enough money for the game?

(Flesch Kincaid Reading Level 3.45)

11. *Smelly Food Preparation*

The kids would be home from school soon. It was time to get dinner ready. Sandy cleaned all the vegetables she needed for the meal. She put all the needed foods into a pot and **WAS COOKING / COOKED** them. While getting some spices from her garden to add to the dish, Sandy talked with Kate, who was grilling burgers. Kate always knew the latest news from their street. They stood chatting for awhile across the fence. After a few minutes, the two friends noticed the smell of something burning.

Why was there the smell of something burning?

(Flesch Kincaid Reading Level 4.0)

12. *The Tooth*

Jose's tooth was getting looser by the minute. He simply could not leave it alone while sitting in class. Wiggling it with his tongue had become a habit. For a quick snack, Jose **WAS EATING / ATE** a delicious beef jerky. When he bent down to pick up the wrapper he had dropped, he hit his lip on the corner of desk. He wasn't quite done with his task, but his class was lining up to go to gym. Jose still needed to change into his gym shoes. Next thing he knew he felt a sharp pain and he felt something pointy swimming around in his mouth.

Why did Jose feel something pointy swimming in his mouth?

(Flesch Kincaid Reading Level 2.97)

13. The Science Project

After school, Brendan realized he needed some things for his big assignment. He found a large poster and some markers. But when Brendan couldn't find the glue, he was told it was in row six. Brendan **WAS GETTING** / **GOT** the paste. Suddenly he bumped into someone, and he scrambled to hold his items. He went to the cashier, paid, and left the store. While walking home, he tried to enjoy his free time. When Brendan began working on his project he realized that there was no glue in his shopping bag.

Why was there no glue in his shopping bag?

(Flesch Kincaid Reading Level 3.43)

14. An Accident-filled Afternoon

Shelley was taking a bike ride on a beautiful spring afternoon. The road had not been filled yet, so there were many deep holes left over from winter's snow and ice. The street was empty except for a parked car up ahead. Impatiently, she **WAS PASSING** / **PASSED** the parked car. Unexpectedly, a huge deep pothole was right in her path, forcing her to steer quickly to the right. Within seconds, several thoughts raced through her head. Would she be able to keep her balance? Would she damage her bike if she fell? She felt a strong bump.

Why did Shelley feel a strong bump?

(Flesch Kincaid Reading Level 4.08)

15. Work Day

Jenny and Kerry decided to get some work done around their apartment. They had been busy all day from painting the walls to waxing the floors. In the evening Kerry was relaxing, but Jenny still wanted to hang her favorite picture. She marked the wall and **WAS HAMMERING / HAMMERED** in the nail. Kerry, while getting a snack, bumped into a big stack of books, which came crashing down. Jenny sighed in relief because she had moved her tea cup collection. Some of them came from faraway places. A neighbor called to complain about the noise.

What noise made the neighbor upset?

(Flesch Kincaid Reading Level 3.66)

16. Painful Cleaning Process

Nicole was helping her mom get the house ready for some guests. Her aunt, uncle, and cousins were coming to stay for a family reunion in town. Mom said that they would have to stay in her room. Nicole **WAS MAKING / MADE** the bed and felt a slight twinge in her back. Then, she quickly bent over to pick up dirty clothes off the floor. She realized that she had been such a slob lately. She would have to try harder to help her mom now. Suddenly Nicole had a sharp pain because she had thrown out her back.

Why had Nicole thrown out her back?

(Flesch Kincaid Reading Level 3.17)

17. *The Reader*

Amy was a very quiet and shy little girl, who loved to read. She often kept herself shut up in her room just to finish a few more pages. One beautiful afternoon, Amy was lying on her bed reading. She **WAS PUTTING/ PUT** a bookmark in her book. Amy got up and opened the window to let in the breeze. The weather had been extremely hot lately, but her mom refused to turn on the air conditioning. Amy watched the trees blowing outside and felt the cool wind on her face. When she turned back to her book, she had lost her page.

Why did Amy lose her page?

(Flesch Kincaid Reading Level 3.2)

18. *After School Duties*

When Sam got home from school, his first job was to let the dog out. His second job was his homework. After a very hard day, Sam decided to play a game on the family computer because he needed a brain break. When he heard his Dad's footsteps up the stairs, Sam **WAS TURNING / TURNING** off the computer. Sam quickly started unpacking his backpack and realized he had never let the dog out. He had been in trouble with his dad earlier that month for his after school behavior. His dad had been so mad that Sam was grounded for a weekend. When Sam looked at his dad's face to say hello, he knew he was in trouble again.

Why was Sam in trouble again?

(Flesch Kincaid Reading Level 4.06)

19. *The Jokester*

Chris was a real practical jokester. His friends could never be too careful around him.

His favorite trick was the simple bucket over the door trick. Chris **WAS PLACING** /

PLACED the bucket full of water expertly over the slightly open door. Chris jumped down and realized that he had somehow tracked dirt and mud all over the clean floor.

His mother would be absolutely furious with him. She was such a neat freak and really hated a messy floor. When she charged into the room, she was shocked.

Why was Chris' mother shocked?

(Flesch Kincaid Reading Level 3.39)

20. *The Lost Ring*

When Megan didn't want her ring on her finger, she always set her ring in the same place, the kitchen window sill. One day Megan decided to bake some bread. She mixed the ingredients and was about to prepare the dough. Megan **WAS TAKING** / **TOOK** off her ring when the doorbell rang. It was just a salesman, so she quickly dismissed him and began roughly kneading. She irritated by interruptions when she had a task to accomplish. Later, with the bread in the oven, she began cleaning up the kitchen.

She glanced down at her hands while sweeping the floor and realized her ring was gone!

Where had Megan's ring gone?

(Flesch Kincaid Reading Level 3.66)

21. *The School Dance*

Ben was at the school dance. He had really dressed up for it. After a fast dance, he slipped around the corner because his clothes felt uncomfortable. He **WAS TIGHTENING / TIGHTENED** his belt. Then he noticed that there was a huge mustard stain right on his tie. Ben was very upset because it was one of his favorites. He had gotten it as a Christmas present. When the girl he liked came around the corner, Ben was so embarrassed.

Why was Ben embarrassed?

(Flesch Kincaid Reading Level 3.82)

22. *The Cleaning Lady*

Despite her pet and dust allergies, Shirley's job was cleaning houses. She was afraid of cats too, and some of her clients owned them. Once she was asked to clean a house that the owners were getting ready to sell. She **WAS DUSTING/DUSTED** the filthy living room. When a black cat walked into the room, Shirley began to breathe too quickly. Shirley thought she would faint from fright. Making herself calm down, she counted backwards slowly from ten. When she got to zero, she sneezed.

Why did Shirley sneeze?

(Flesch Kincaid Reading Level 3.9)

23. A Plane with Pain

John's favorite hobby was putting together model airplanes. On the weekends he would sit for hours pouring over his latest model. He had a new one to begin today of a P-3 Orion. He grabbed a scissors from the table and **WAS CUTTING** / **CUT** out all of the plastic model pieces. While slowly leaning against the shelves to support his back, John lost his balance. Immediately, he started worrying about the tiny pieces. They would be all over the floor and impossible to find. He felt a strong pain.

What caused the pain when John lost his balance?

(Flesch Kincaid Reading Level 3.55)

24. Summer Daydreaming

The beginning of summer vacation at last! Lizzie was looking forward to free time and sunny days. She put her hair up and headed out to the pool for a quick swim. Lizzie put her feet in and **WAS TESTING** / **TESTED** the water. The breeze picked up and the wind started blowing more steadily. She was thinking about her plans that night. Her family was going to the baseball game, another great summer pastime. Lizzie shivered.

Why did Lizzie shiver?

(Flesch Kincaid Reading Level 3.74)

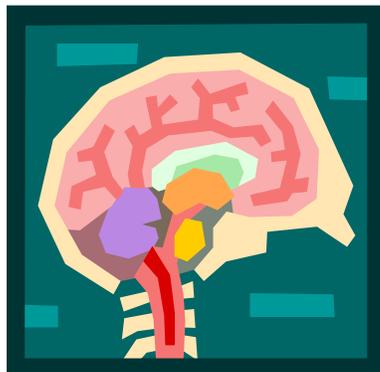
APPENDIX B
INFERENCE ILLUSTRATION

INFERENCE ILLUSTRATION



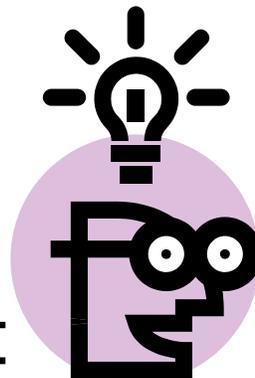
The words you read...

+



What you know in your brain...

=



Inference

APPENDIX C
TEST FORMAT EXAMPLE

TEST FORMAT EXAMPLE

Delayed Posttest – Student ____

Date _____

Instructions:

1. Read each story twice.
2. You may ask Mrs. Feyder about words you don't know.
3. After reading the story twice, answer the question on the back.
4. You may NOT look back at the story to answer the question.
5. If there is more than one answer, please write all possible answers.

1. The Jokester

Chris was a real practical jokester. His friends could never be too careful around him. His favorite trick was the simple bucket over the door trick. Chris **WAS PLACING** the bucket full of water expertly over the slightly open door. Chris jumped down and realized that he had somehow tracked dirt and mud all over the clean floor. His mother would be absolutely furious with him. She was such a neat freak and really hated a messy floor. When she charged into the room, she was shocked.

Why was Chris' mother shocked?

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