ABSTRACT

Title of Document: READING COMPREHENSION STRATEGY INSTRUCTION IN UPPER-ELEMENTARY CLASSROOMS WITH ENGLISH LANGUAGE LEARNERS: A STUDY OF PRACTICES AND OUTCOMES

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The goal of this study was to investigate the relationship between reading comprehension strategy instruction (explicit or skills-based) in general education settings and third through fifth grade students' reading comprehension outcomes. In addition, I was interested in whether relationships between instruction and outcomes differed for students from English only (EO) and English language learner (ELL) backgrounds. To address these goals I conducted a secondary data analysis of 59 Reading/Language Arts classroom observation transcripts. These represented observations of 19 teachers at three time points (fall, winter, spring). I analyzed transcripts by employing an iterative coding process including open, axial, and selective coding (Strauss & Corbin, 1990). I coded teacher talk at the utterance (Crookes, 1990) level for either explicit instruction (instruction that included all of

the following: introduction, modeling, collaborative practice, guided practice, independent practice) or skills-based practice (teacher practice in which students were asked to apply a comprehension strategy absent of instruction of how to do so). In addition I coded for separate parts of the explicit instruction model (introduction, modeling, collaborative practice, guided practice, independent practice). Then, I quantitized (Tashakori & Tedlie, 1998) the instructional code data into average frequency counts across observations in order to conduct multiple regression analyses with student reading comprehension outcome measures. I found no statistically significant results related to the explicit instruction model (as a whole), or skills-based practice and students' outcomes. However, when analyzing *separate* parts of explicit instruction, results suggested that more guided practice was associated with higher scores on one outcome measure. In exploring interactions between language background and instructional codes, I found no differences in relationships between instructional codes and reading comprehension for EOs versus ELLs.

READING COMPREHENSION STRATEGY INSTRUCTION IN UPPER-ELEMENTARY CLASSROOMS WITH ENGLISH LANGUAGE LEARNERS: A STUDY OF PRACTICES AND OUTCOMES

By

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Chapter 1: Introduction to the Problem

Statement of The Problem

Reading is undoubtedly one of the most important components of children's schooling. Low reading skills are correlated with poverty (Barton & Jenkins, 1995), rates of incarceration (Svensson, Lundberg & Jacobson, 2003; Newman, Lewis & Beverstock, 1994), and employability (Sum, Kirsch, & Taggart, 2002). Although students from varying socioeconomic backgrounds arrive at school with different degrees of reading readiness, teachers' instruction can influence students' trajectory of reading development (Morrison, Bachman, & Connor, 2005; Snow, 2001). Specifically in the area of reading comprehension, experts agree that reading comprehension instruction can have a positive effect on students' development (Aarnoutse, VanLeeuwe, Voeten, & Oud, 2001; Dickinson & DeTemple, 1998; Snow, 2001) and that variation in instruction contributes uniquely to students' comprehension outcomes (e.g., Connor, Morrison, & Petrella, 2004; Datnow & Castellano, 2000; Englert & Tarrant, 1995; Jenkins & Leicester, 1992; Klingner, Vaughn, Hughes & Arguelles, 1999; Silverman et al., 2014; Taylor et al., 2003). In fact, Snow (2001) noted that reading comprehension instruction is a "most powerful means of developing proficient comprehenders and preventing reading comprehension problems" (p. xvii).

However, research suggests that, historically, elementary-aged students are exposed to limited instruction focused on reading comprehension in everyday, or natural, classroom settings (Au, 2009). Furthermore, findings from research in natural, everyday classroom settings are inconsistent. Some findings indicate positive associations between instruction and students' reading comprehension outcomes (e.g., Carlisle, Kelcey, Berebitsky, & Phelps, 2011; Connor, Morrison, & Petrella, 2004; Silverman, Proctor, Harring, Doyle, Mitchell, & Meyer, 2014;

Taylor, Pearson, Clark, & Walpole, 2000) and some findings indicate negative associations between instruction and student outcomes (e.g., Bitter, O'Day, Gubbins, & Socias, 2009; Carlisle et al., 2011;Taylor et al., 2000). The findings from this line of research in natural settings contradict the findings from intervention research, that suggest that comprehension instruction has a positive effect on students' reading comprehension (e.g., Gersten et al., 2007; Kamil et al., 2008; NICHD, 2000; Shanahan et al., 2010).

Intervention research is research in which a specific instructional treatment, in this case reading comprehension instruction, is created by researchers and implemented in a controlled experimental setting. Within these studies, researchers monitor instruction and report on the fidelity to instruction, to ensure that teachers deliver the treatment appropriately or in a high-quality manner. Given that teacher variation in instruction contributes uniquely to students' reading comprehension outcomes, as examined in more controlled settings (e.g., 2004; Datnow & Castellano, 2000; Englert & Tarrant, 1995; Jenkins & Leicester, 1992; Klingner, et al., 1999) it is important to examine this relationship in everyday classroom settings. In order to inform professional development and curriculum design aimed at supporting students' reading comprehension in upper-elementary school, much more needs to be known about teachers' instruction and the relationship between instruction and student outcomes in everyday classroom settings.

In studies of instruction in everyday settings, researchers generally observe and report on regular, unmediated classroom instruction, and do not evaluate fidelity to a curriculum or intervene in instruction. Because most speech in a classroom setting is attributed to teacher talk (e.g., Boyd & Rubin, 2002; Chaudron, 1988; Nystrand, 2006) and this talk influences classroom discussion (e.g., Cazden, 1998; Chaudron, 1988; Lindsay, 1990) and students' understanding

(e.g., Duffy et al., 1986; Montanaro, 2012), in observation of everyday instruction, education researchers often analyze instruction through evaluation of teacher talk (e.g., Applebee et al., 2003; Aukrust, 2007; Bowers & Vasilyeva, 2011; Dickinson & Porche, 2011; Duffy et al., 1986; McNeil, 2011; Reznitskaya, 2012; Walqui, 2006).

Among the limited observation research focused on reading comprehension instruction, there are findings to suggest that the relationship between teachers' practice and students' outcomes is influenced by students' language background (e.g., Bitter et al., 2009; Carlisle et al., 2011; Silverman et al., 2014). Given that English language learners (ELLs)--especially those in upper elementary school--spend the majority of their instruction in general education settings (Calderon, Slavin, & Sanchez, 2011), and are a population of students that consistently exhibit difficulty with reading comprehension (NCES, 2009; 2011), it is important to understand how general-education teachers provide instruction to support the reading comprehension of ELLs.

It is especially important to understand the nature of instruction in general-education or what is referred to as Tier One settings within a Response to Intervention (RTI) framework, given that ELLs spend the majority of instructional time in this setting (Calderon, Slavin, & Sanchez, 2010). ELLs may be at risk for incorrect identification for special education services, in part due to their language differences, and Tier One instruction is the first line of defense against incorrect identification. As such, it is necessary to understand the relationships between different types of reading comprehension instruction and students' reading comprehension outcomes in Tier One settings with linguistically diverse learners and whether these relationships differ for EOs and ELLs. Thus, the purpose of the present study is to explore the relationship between reading comprehension instruction in everyday upper elementary classrooms with students from

diverse linguistic backgrounds and students' reading comprehension outcomes and investigate whether relationships differ by language background.

In this chapter, I define and explain the importance of reading comprehension, and provide a brief review of research-based best practices related to reading comprehension. Then, I discuss the current state of reading comprehension instruction in U.S. elementary schools, including the challenges that ELLs experience with reading comprehension when reading in English. Next, I provide an overview of classroom observation research. Finally, I close with the research questions guiding the present study.

Definition of Reading Comprehension

A reader's comprehension of a text occurs at many levels -- from word, to sentence, to paragraph and beyond. Although reading comprehension is discussed widely throughout the literature in the literacy field, a concrete definition of the term is not often presented in research studies related to reading comprehension. Definitions of reading comprehension range from brief descriptions to more detailed accounts of what skilled readers do during reading. Though this study is focused on reading comprehension instruction, it is vital to understand the definition of reading comprehension that informs my conceptualization of reading comprehension instruction. As such, in this study, I draw on the definition of reading comprehension from the National Association of Educational Progress:

> Reading is an active and complex process that involves multiple different behaviors. Readers often begin by forming an overview of text and then search for information to which they must pay particular attention. Following this initial overview, readers progress with different levels of interaction with text, including

> interpreting and evaluating what they read. By drawing on previous reading experiences and prior knowledge, they form hypotheses about what the text will communicate and revise their initial ideas and their knowledge base as their reading continues. Readers continuously acquire new understandings and integrate these into their ongoing process of building comprehension. Good readers monitor their understanding of text, recognize when text is not making sense, and employ a range of strategies to enhance their comprehension. Good readers also evaluate the qualities of text, and these evaluations can affect whether a text is remembered or has an impact on readers' knowledge, attitudes, or behaviors (Pressley and Afflerbach 1995; Ruddell and Unrau 1994). Depending on the situation and purpose for reading, good readers can use the ideas and information they acquire from text to, for example, expand their thinking about a topic, perform a specific task, or draw conclusions or make generalizations about what they have read (National Assessment Governing Board, 2015).

The key to this definition is that reading comprehension is not an end point. Readers continuously use strategies in order to perform a number of tasks continuing well-past conclusion of reading a given text. In order for readers to employ strategies for comprehension, they must receive instruction in how to select and use these strategies.

Reading Comprehension Instruction

Although the literature suggests the importance of reading comprehension instruction as well as effective strategies to learn and a model through which students can best learn, the association between variation in teacher practice and students' reading outcomes is well-documented in the literature in settings ranging from scripted instructional interventions to general classroom practice (e.g., Datnow & Castellano, 2000; Englert & Tarrant, 1995; Jenkins & Leicester, 1992; Klingner, Vaughn, Hughes & Arguelles, 1999, Silverman et al., 2014). Given the documented relationship between teachers' instruction and students' outcomes, it is relevant to explore this phenomenon in relation to reading comprehension (e.g., Aarnoutse, et al., 2001; Dickinson & DeTemple, 1998; Snow, 2001).

Researchers agree that strategy use is an important element of successful comprehension (e. g., Duke & Pearson, 2002; NICHD, 2000). Through intervention literature, a number of strategies have been established as most effective for readers to use. These strategies include making predictions, using text structure, creating and using visual representations of text, summarizing, and generating questions (e.g., Duke & Pearson, 2002; NICHD, 2000; Snow, 2001). Observational research reveals that teachers approach reading comprehension strategy instruction in two distinct ways: explicit strategy instruction and skills-based strategy practice (e.g., Carlisle et al., 2011; Connor et al., 2004; Pressley et al., 1998; Taylor et. al., 2000).

A number of studies include delineation between instruction provided to students in relation to general reading instruction that is to varying degrees explicit, or includes introduction and explanation of a strategy along with modeling and practice with the strategy. These studies reveal positive correlations with students' growth in reading comprehension (e.g., Bitter et al., 2009; Carlisle et al., 2011; Connor et al., 2004). In contrast to explicit strategy instruction, skills-based strategy practice is teacher practice in which students are asked to apply or practice

strategies without direction or explanation of how to do so (Taylor et al., 2000; Afflerbach, Pearson & Scott, 2008). Numerous studies indicate a negative relationship between amount of time spent on comprehension skills and overall literacy achievement (e.g., Bitter et al., 2009; Knapp, 1995; Taylor et al., 2000). However, no studies directly compare the relationship between these two types of instruction – explicit strategy instruction and skills-based strategy practice -- and students' reading comprehension outcomes. Furthermore, no studies have examined the relationship between language status (i.e. English only (EO) vs. English language learner (ELL)) and type of comprehension strategy instruction on students' reading comprehension outcomes.

In sum, reading comprehension strategy practice can fall into two categories: skills-based and explicit strategy instruction. Skills-based practice is practice in which teachers ask students to complete tasks or answer questions that rely on their use of a strategy for comprehension. In turn the teacher provides feedback (usually simple evaluative feedback such as yes or no). Afflerbach, et al. (2008) explained that skills-based instruction is aimed at practicing skills to improve efficiency after accompanying instruction has occurred. The definition used in this paper for skills-based practice is practice in which students are asked to perform a task using a comprehension strategy, but no instruction surrounds this request. Thus skills-based practice is not instruction, rather it is a request for task completion.

In their work, Afflerbach, et al. (2008) explained that teaching for strategy development differed from skills-based practice because "when we are teaching strategically, we help students to analyze tasks, to consider various approaches to performing the task, and to choose among alternative actions to reach the goal (p. 372)." Thus, the end goal of strategy instruction is not mastery of the strategy itself, but the use of strategies for reading comprehension and associated

tasks. The explicit model of instruction supports such teaching for strategy development. Thus in this paper, the explicit model of comprehension strategy instruction is defined as instruction aimed at teaching for reading comprehension strategy development that includes an introduction, modeling, guided practice, collaborative practice, and independent practice.

State of reading comprehension instruction in general-education classrooms. Although some literature exists related to teachers' practice in reading comprehension *intervention* research, far less research exists to explore teachers' comprehension instruction in *everyday natural settings* and whether this instruction is related to student outcomes in reading. Furthermore, there is little research on classroom instruction related to reading comprehension in upper-elementary school with ELLs. In general, upper-elementary students consistently exhibit difficulty with reading comprehension (e.g. NCES 2009, 2011) because they are expected to read more challenging text (Catts, Compton, Tomblin, & Bridges, 2012; Chall & Jacobs, 2003).

State of English Language Learners in U. S. Schools

Between 1998-1999 and 2008-2009 the number of ELLs in U.S. public schools grew more than 51%. In comparison, the total student enrollment growth in U.S. public schools was only 7% (NCELA, 2011). In 2003, over 14% of students in U.S. schools spoke a first language other than English. And, it is estimated that approximately 40% of students in schools in the United States will speak a language other than English at home by 2038 (U.S. Department of Education & National Institute of Child Heath and Human Development, 2003).

Although the ELL population has been studied and tracked for some time in the literature base, ELLs were only recently recognized as a subgroup under federal policy. In fact, the first definition for ELLs appeared in the No Child Left Behind Legislation (NCLB, 2001). (Note: There are many ways to describe and label students whose first language is not English, however

this group of students is usually referred to as Limited English Proficient, or LEP, in policy documents. In the research literature, this group of students is most often referred to as ELLs, and thus will be referred to in this manner in this paper. Other researchers may refer to ELLs as English as a Second Language (ESL) students, English learners (ELs), bilingual students, emergent bilinguals (EBs), or Language Minority (LM) students.) Under NCLB, the definition for ELL students was provided as follows.

> The term 'limited English proficient' . . . Means an individual aged 3 through 21 who is enrolled or preparing to enroll in an elementary school or secondary school, who was not born in the United States or whose native language is a language other than English. . . Who comes from an environment where a language other than English has had a significant impact on the individual's level of English language proficiency. . . And whose difficulties in speaking, reading, writing, or understanding the English language may be sufficient to deny the individual the ability to meet the State's proficient level of achievement. . . The ability to successfully achieve in classrooms where the language of instruction is English, or the opportunity to participate fully in society [P. L. 107-110 910 (21)].

Related to this definition, for this study ELLs are defined as students for whom a) a language other than English (even if in addition to English) was spoken in the home, and/or b) English was not the first language. Students who speak both English and another language socially and at home are to some extent bilingual (Grosjean, 2010). Though these students may

be proficient with social English, many have had limited exposure to academic English, a necessary factor for success in school (Lesaux & Geva, 2006). In this study, the term ELL is encompasses students who receive English as a Second Language (ESOL) services through their school district, as well as those students who may not because they have been exited from or never received services.

ELLs represent a large population of the U.S. public school system, and, unfortunately, comprise the population of the most under-performing students on national assessments. Specifically, on the most recent National Assessment of Educational Progress (NAEP, NCES, 2011) fourth-grade ELLs comprised 25% of the lowest performing students. And, while the focus of this paper is upper-elementary school, it is pertinent to note that the reading comprehension trajectory of older ELLs continues in a downward trend: only 29% of eighth-grade ELLs performed at or above basic levels (only 3% above proficient) with similar findings documented with 12th grade ELLs. Given these data collected on national assessments such as the NAEP, it is, perhaps, not surprising that ELLs are nearly twice as likely to drop out of high school (10.2% compared to 5.8 % of non-ELL peers) (Rumberger, 2006).

Although the number of ELLs in U. S. classrooms is increasing at a rapid pace, often funding for ELL supports and the recruitment of teachers who have certification and/or training in teaching ELLs does not increase at the same rate as ELL student growth (Calderon et al., 2011). Local education agencies note a lack of trained staff with knowledge in working with ELLs (Calderon et al., 2011). In fact, while 40 percent of teachers report teaching ELLs on a daily basis, only 12.5 percent of teachers report having more than eight hours of training to support ELLs (NCES, 2002). However, research suggests that classroom teachers who have more knowledge about addressing the needs of ELLs in their classrooms and have a positive

attitude about providing instruction to ELLs in an inclusive setting have students with stronger vocabulary and comprehension skills (Gray, 2012). In addition, school districts highlight that existing assessments are not always helpful in distinguishing the difference between language acquisition needs and disabilities for ELLs.

On average, elementary ELLs may spend thirty minutes per week receiving ESL instruction. However the majority of ELLs' instruction is provided in general education classrooms (Calderon, et al., 2011). ESL instruction is generally focused on language acquisition as opposed to supporting the academic instruction that occurs in the general education classroom. Thus the general-education classroom is the where ELLs receive the majority of their reading instruction. This setting, also known as the Tier One setting in the Response to Intervention (RTI) model, requires strong instructional practices to ensure that students, especially ELLs, are not incorrectly identified for learning difficulties (e.g., Vaughn & Ortiz, 2015). Thus, it is important to understand what practices related to reading comprehension are most strongly associated with students' reading comprehension outcomes. Given that general-education classroom teachers provide the majority of instruction to ELLs, it is important to examine to the literacy instruction of ELLs, especially upper-elementary ELLs, in general-education classrooms. Furthermore, it is key to investigate whether the relationship between instruction and outcomes is the same for EOs and ELLs in order to understand if the two groups benefit from the same instruction in general education settings.

Reading comprehension and ELLs. Although there has been a call to improve reading comprehension in elementary students, and there has been an increase in research and assessment related to reading comprehension, little is known about reading comprehension practices that are most effective for ELLs. In fact, in their analysis of effective literacy instruction for ELLs, the

National Literacy Panel (NLP) found very few studies that related specifically to reading comprehension outcomes of ELLs (August & Shanahan, 2006). However, from the limited information available, conclusions can be drawn suggesting that a) ELLs' achievement in reading comprehension is well below that of their EO peers (Lesaux et al., 2006; Proctor et al., 2005) and b) ELLs who receive comprehension instruction, whether in general education settings (with EOs and ELLs) or in groups of only ELLs, benefit (e.g., Bitter et al., 2009; Carlisle et al., 2011; Echeverria, Short, & Powers, 2006; Gersten et al., 2007; Proctor, Dalton, & Grisham, 2007; Silverman, et al., 2014). Similar to strategies established as generally effective comprehension strategies for all students, some of the most effective strategies for ELLs have been cited as: questioning, making inferences, monitoring, and summarizing to enhance their reading comprehension (e.g., Proctor, et al., 2007).

In a previous study, Silverman et al. (2014) explored the relationship between teacher practice and student outcomes in general-education classrooms with large populations of bilinguals, referred to in the present study as ELLs. Surprisingly, they found that that although teachers implemented some research-based instructional practices related to reading comprehension, such as inferential instruction, strategy instruction, literal instruction, and instruction related to text elements, analyses revealed that only inferential instruction and strategy instruction were positively related to student outcomes. Findings showed that more instruction related to making inferences was related to greater change in students' reading comprehension across a year. Findings also showed that more instruction related to comprehension strategies was related to greater change in students' reading comprehension for ELLs but not for EOs. Examples of the observed strategies included previewing, activating background knowledge, summarization, monitoring, and visualizing.

The researchers suggested that more research related to different types of instruction related to making inferences and other comprehension strategies as well as literal comprehension and text features is necessary. They additionally recommended that further research should explore the relationship between the explicitness of reading comprehension instruction and students' reading comprehension outcomes. Secondly, the authors noted that the majority of instruction occurred through an Initiate-Respond-Evaluate, or IRE model of practice (Mehan & Cazden, 2013). In this approach, similar to a model of comprehension instruction described by Durkin (1978/1979) teachers asked a question, elicited a student response, and evaluated the response with comments like, *good, yes, or no* (Fisher & Frey, 2007). The researchers posited that through an explicit model of comprehension instruction that included a gradual release of responsibility (Duke & Pearson, 2002), students' comprehension outcomes would improve. (See Chapters 2 & 3 and Silverman et al., 2014 for more detail on this study.)

Classroom Observation Research

The methods of investigation into everyday classroom instruction vary greatly, ranging from recording and analyzing general observation field notes (e.g., Connor et al., 2004; Pressley et al., 1998), to coding instruction during live observations (e.g., Bitter et al., 2009; Durkin, 1978/1979; Ness, 2011; Taylor et al., 2000), to analysis of teacher talk (e.g., Bellack, Kleibard, Hyman, & Smith, 1966; Flanders, 1970; Parker & Hurry, 2007; Silverman et al., 2014; Sinclair and Coulthard, 1975). Each approach to classroom observation has strengths and limitations in understanding the nature of everyday instruction. For instance, general field note observations allow a researcher to capture information about a classroom environment, nonverbal instruction, student engagement, and more. However, this type of data collection is limited, as it possible an observer could miss key information while recording notes. In addition, this type of observation

could tend to be biased as an observer may record information of interest to the researcher and miss other pertinent observations. Similarly, coding while observing could lead observers to miss important instructional activity while recording notes and trying to apply codes simultaneously. Audiorecorded and transcribed teacher talk does not capture factors such as teacher-student interactions or nonverbal cues, but it it does allow for discrete analysis of classroom instruction as manifested in teacher talk. Given that much of classroom instruction is delivered through teacher talk, analysis at this level can provide an important glimpse into the nature of classroom instruction. Considering that teachers' often quickly change from one type of instruction to another as they introduce a topic or interact with students, teacher utterances (i.e., sentence-like speech units) are examined in the present study in order to look closely at how teachers deliver instruction. This unit of analysis was chosen order to fully capture all instruction that took place since multiple types of instruction occurred from utterance to utterance. Another strength of this method, is that multiple coders can analyze transcripts with more reliability because there is less to be interpreted. Given these strengths and limitations, and since the majority of classroom talk is attributed to teachers (e.g., Boyd & Rubin, Chaudron, 1988; Nystrand, 2006) and this talk influences student understanding (Duffy, et al., 1986; Montanaro, 2012) it is important to explore what teachers say and how they communicate to their students.

Much of the research examining teacher talk in relation to reading comprehension is representative of controlled settings. That is, researchers trained teachers on a specific intervention and within that context explored the teacher talk. Duffy et al. (1986), for example, coached teachers to include explicit explanations in their reading instruction, specifically reading comprehension instruction. Then, they explored the relationship between teacher explanations

and students' understanding of lesson content and found that "differences in what teachers say may create differences in student understanding" (p. 12). Other research suggests the importance of teacher talk in the development of language and literacy development in younger students, (e.g., Aukrust, 2007; Bowers & Vasilyeva, 2011; Dickinson & Porche, 2011), and teacher questions and scaffolding with older students (e.g., Applebee et al., 2003). In fact, related to ELLs, much research includes teacher talk as a unit of analysis. Researchers examine how teachers create classroom discourse and how teachers play a role in that discourse through examining teacher talk (e.g., Boyd & Rubin, 2002; Chaudron, 1988; McNeil, 2011; Nystrand, 2006; Reznitskaya, 2012; Sinclair & Coulthard, 1975; Walqui, 2006).

Though this line of research provides important insights into the relationships between teacher's instructional talk and student outcomes, it has been conducted in highly controlled, experimental settings, leaving much to be explored in everyday classroom settings. More research needs to be conducted to understand how teachers' reading comprehension talk, in natural classroom settings, is related to students reading comprehension outcomes. And, though some research examines the role of teacher talk in ELLs' learning in general (e.g., Boyd & Rubin, 2002; Chaudron, 1988; Nystrand, 2006; Sinclair & Coulthard, 1975), more research is needed to examine the role of teacher talk specifically related to ELLs' reading comprehension learning.

Purpose of this Study

During upper-elementary school, students, especially ELLs, can exhibit great difficulty with reading comprehension. In light of recent findings of Silverman et al., (2014) who a) found few relationships between teacher instruction and student outcomes, and b) made the suggestion that teachers may not have provided explicit instruction, it is important to further investigate how

teachers instruct students to use reading comprehension strategies. In addition, it is important to explore how such instruction is related to students' outcomes in reading comprehension. Since students spend the majority of their instructional time in a general-education setting, the purpose of study is to explore the relationship between teachers' reading comprehension strategy instruction and student outcomes in everyday general-education settings. In addition, I was interested in the interaction between teachers' instruction, as quantified by teachers' utterances, and students' language status with student outcomes.

The research questions guiding the study are as follows:

1. a. Controlling for students' language status and prior achievement, what are the relationships between explicit and skills-based reading comprehension strategy instruction and reading comprehension outcomes?

   b. What are the relationships between parts of explicit reading comprehension instruction (i.e., introduction, modeling, collaborative practice, guided practice, and independent practice) and student outcomes?

2. a. Do relationships between reading comprehension instruction and outcomes differ for EO and ELL students?

   b. Do the relationships between parts of reading comprehension instruction (i.e., introduction, modeling, collaborative practice, guided practice, and independent practice) and outcomes differ for EO and ELL students?

Definition of Terms

The following list is a brief description of terms that will be used throughout this paper. More in depth definitions will be provided in Chapters 2 and 3.

Content of Instruction refers to *what* is being taught. In the case of reading comprehension instruction, content might include instruction about strategies such as summarizing or making inferences, how to use text structure, or genre of a text.

Delivery of Instruction refers to *how* something is taught. Delivery of instruction might include discussion, explicit instruction provided by a teacher, or a teacher assigning tasks for students to complete.

English Language Learners (ELLs) are students who were not born in the United States and/or whose native language is a language other than English. ELLs are students who come from an environment where a language other than English has had a significant impact on the individual's level of English language proficiency [P. L. 107-110 910 (21)]. ELL is the term used in many research studies and school settings to describe this group of students, while Limited English Proficient (LEP) is the term usually used in policy. In this study, ELLs are students whose parents indicated on a researcher's language survey that Spanish was spoken in the home.

English Only (EO) students include students whose parents reported that no language other than English was spoken at home.

Explicit Instruction is an instructional model that includes an explicit description of the strategy including when and how it should be used, modeling, collaborative use of the strategy, guided practice, independent practice and application of strategies in authentic, connected text (Duke & Pearson, 2002; Pearson & Dole, 1987).

Gradual Release of Responsibility is a model in which "teachers move from a situation in which they assume all the responsibility for performing a task while the student assumes none . . . to a

situation in which the students assume all the responsibility while the teacher assumes none" (Duke & Pearson, 2002, pp. 209-210).

Limited English Proficient is the term often used by policymakers to refer to English Language Learners (see definition above).

Reading comprehension is the active, complex, cognitive process in which readers engage to construct meaning. For successful reading comprehension, readers use strategies and draw on background knowledge before, during, and after reading.

Scaffolds are supports a teacher (or another adult) provides to help a student access material that is unfamiliar (Palincsar, 1986). Examples of scaffolds include teacher demonstration or modeling when introducing a new concept (Wood et al.,1986), and teacher prompts to use a certain strategy (Pentimonti & Justice, 2010).

Skills-based strategy practice is instruction in which teachers ask a student to complete a task using a comprehension strategy but do not provide instruction on how to use the strategy.

Social Constructivist Theory emphasizes the role of the teacher as "more knowledgeable other" (Mariage, Englert, & Garmon, 2000, p. 299) who through interactions with a student, assesses and understands a student's level of understanding (Eagan, 2009) in order to present appropriately difficult tasks, or tasks within a student's zone of proximal development (ZPD; Vygotsky, 1978, p. 33).

Social Learning Theory emphasizes the role of observation and imitation of a teacher as well as participation in learning in order to learn (Bandura, 1977).

Zone of Proximal Development (ZPD) is defined as the area in which a student would struggle to accomplish a task independently, but would be able to successfully accomplish if provided supports by the "more knowledgeable other" (Vygotsky, 1978).

Chapter 2: Review of the Literature

The purpose of this chapter is to synthesize the existing literature related to reading comprehension instruction in upper-elementary general education classrooms. First, I explain the theories influencing this review. Then, I summarize the existing literature that explores classroom observation of reading comprehension instruction. Last, I identify gaps in the research base that the present study aims to fill.

Theoretical Background

In order to be successful readers, children need to master a number of skills as well as learn and apply strategies in order to understand text. Research suggests that teacher variation contributes uniquely to students' change in learning outcomes (e.g., Datnow & Castellano, 2000; Englert & Tarrant, 1995; Jenkins & Leicester, 1992; Klingner, Vaughn, Hughes & Arguelles, 1999, Silverman et al., 2014). Instruction is especially effective when teachers provide supports for student learning throughout instruction (Baumann, et al., 2003; Duke & Pearson, 2002; Taylor, Pearson, Peterson, & Rodriguez, 2003; Vygotsky, 1978). Social constructivist theory suggests that more experienced others (i.e., teachers) influence children's learning by assisting in their acquisition of information (Vygotsky, 1978) and similarly social learning theorists laud the practice of "scaffolding", or providing supports to help students move from what is known to what is unknown during instruction. In contrast to solely drilling on basic reading skills, teachers who spend time providing instruction on strategic reading are most effective (Duke & Pearson, 2002). And, although children may enter a classroom with varied reading ability, evidence suggests that teachers' effective reading comprehension instruction can positively

influence students' development in this crucial area of reading (e.g., Connor, Morrison, & Petrella, 2004; Taylor et al., 2003). Thus, the theoretical framework guiding this study is rooted in a) social learning theory and social constructivist theory and b) explicit instruction.

Social learning theory and social constructivist theory. Students learn through observing and imitating teachers (Bandura, 1977) as well as interacting with teachers and others (Palincsar, 1986; Vygotsky, 1978). Social Constructivist Theory emphasizes the role of the teacher as "more knowledgeable other" (Mariage, Englert, & Garmon, 2000, p. 299) who, through interactions with a student, assesses and understands a student's level of understanding (Eagan, 2009) in order to present appropriately difficult tasks, or tasks within a student's zone of proximal development (ZPD; Vygotsky, p. 33). Formally, the ZPD is defined as the area in which a student would struggle to accomplish a task independently, but would be able to successfully accomplish if provided supports by the "more knowledgeable other" (Vygotsky, 1978).

While Vygotsky (1978) emphasized the importance of the interaction between a teacher, or more knowledgeable other, and student in order for a student to learn, Social Learning Theorist Bandura (1977) highlighted the importance of students imitating teacher behavior in order to learn. With his roots in behaviorism, Bandura did not negate the importance of teacher-student interactions, but rather emphasized the reinforcement of student imitation of teacher behaviors. In sum, the major difference between social constructivist theory and social learning theory is that social learning theory emphasizes the role of observation and imitation of a teacher as well as participation in learning while social constructivist theory emphasizes the role of others and social interactions as a vehicle for constructing knowledge.

Scaffolding involves an adult, or in a classroom setting, a teacher, designating those

components of a lesson that are outside of a student's ZPD (Wood, Brunner, & Ross, 1976). The teacher provides flexible scaffolds or supports that are in place to help the student access that which is unfamiliar. The goal is to completely remove the scaffolds so the student can access the unfamiliar in an independent manner (Palincsar, 1986). Scaffolds can include a wide variety of strategies, both instructional and those intended for a student to use independently. Highly supportive scaffolds can include teacher demonstration or modeling when introducing a new concept (Wood et al., 1976), while lower levels of support may include a teacher prompt to use a certain strategy or verbal prompts (Pentimonti & Justice, 2010).

Explicit instruction. One specific model of instruction that combines elements of Social Learning and Social Constructivist theories as well as the idea of scaffolding is the model of explicit instruction. An instructional model, explicit instruction includes an explicit introduction to and description of the strategy including when and how it should be used, modeling, collaborative use of the strategy, guided practice, and independent practice and application of strategies in authentic, connected text (Duke & Pearson, 2002; Pearson & Dole, 1987).

Explicit instruction begins with a teacher naming and introducing a strategy. This introduction includes a clear explanation of the strategy being presented and procedural information about how to use or apply the strategy. Next, a teacher models (or has a student model) the use of the strategy. In this step the teacher shows students how to use the strategy and thinks aloud about use of the strategy. Then, teachers and students work collaboratively to use the strategy. During guided practice, teachers and students work together to apply a strategy. Additionally, teachers help facilitate students' discussion about and use of the strategy. Furthermore, teachers provide students feedback and encouragement as they attempt to apply strategies. Lastly, when students are unable to appropriately apply the strategy, teachers regain

responsibility and complete the task, while modeling and thinking aloud about the strategy. In the consolidation phase of explicit instruction, teachers review the strategy at hand and lead discussion about when it would be appropriate or helpful to use the strategy. In the last step of explicit instruction, students are provided opportunity for independent practice. During independent practice teachers reteach when individual students exhibit difficulty. This independent practice is generally conducted in a controlled context, or in one that relates to the initial strategy use. Strategy use is reinforced through opportunity to apply strategy knowledge in real texts. Here teachers reinforce with students when and why strategy use is appropriate.

The end goal of explicit instruction, facilitated through the application step is students' "ownership of their strategies" (Pearson & Dole, 1987, p. 159). The emphasis of explicit instruction is not on end products but rather on the process of strategy application to facilitate comprehension. Specifically, "(a) answers, summaries, or strategy applications can be justified and (b) students will assume responsibility for monitoring them" (Pearson & Dole, 1987, p. 160). Related to delivery of explicit instruction, Duke and Pearson (2002) believe in the importance of the teacher's attention to guiding instruction and releasing responsibility to students throughout the guided and independent practice phases of the explicit instruction model. Specifically, teachers must employ a gradual release of responsibility model alongside a model of explicit instruction. In the gradual release of responsibility model teachers moved from assuming all responsibility in task performance (i.e. introducing and modeling) to giving students all responsibility (i.e., independent practice). In this approach, teachers can regain responsibility when necessary and provide supports to students on the path to taking full responsibility (i.e., guided practice and collaborative practice).

Summary of theoretical background. Social learning theorists and social constructivist

theorists agree that the role of the teacher is invaluable in students' learning. Social learning theorists emphasize the teacher's role as demonstrator and the student's role as observer and imitator. Social constructivists agree that demonstration is an important element in instruction but emphasize the importance of interaction between teacher and student to ensure learning. Additionally scaffolding, or providing supports to help students access new information independently, is inherent in both models. The explicit instruction model bridges social learning theory and social constructivist theory as it emphasizes teacher demonstration and guidance as well as teacher-student interaction to help students access new material. The explicit instruction model and the related gradual release of responsibility marry both social learning and social constructivist theories as the teacher serves as the "more knowledgeable other" (Vygotsky, 1978) throughout instruction and scaffolds to help students perform independently.

Thus, keeping in mind these theories of learning that include observation, participation, and interaction, it could be posited that regular classroom instruction invoking such models would yield more learning than the traditional "initiate-respond-evaluate" practice (e.g., Cazden, 1998; Mehan & Cazden, 2013; Nystrand, 2006; Sinclair & Coulthard, 1975). Yet while there are many experts who position themselves in relation to social constructivist theory and social learning theory, and many researchers laud instruction that is explicit and takes into account the gradual release of responsibility, few studies have examined these models empirically, especially related to reading comprehension instruction in general education settings. In fact, related specifically to reading comprehension, Kucan and Beck (1997) suggested that research should examine the elements of such models asking "just how much needs to be said about the process of making meaning during and outside of a discussion focused on meaning making" (p. 292).

Implications for ELLs. As discussed in Chapter 1, one population that exhibits difficulty

with reading comprehension is the ELL population (NCES, 2009; 2011). Given that ELLs often spend most of their school time in general education classrooms, or the setting referred to at Tier One in RTI, with EO peers it is important to examine models of instruction that support all students' needs. Though EOs and ELLs learn together, ELLs are additionally challenged in that they are required to learn and apply what they learn in a language in which they may not be fully proficient. Thus, it is important to examine delivery of instruction that is supportive for all students, but may be particularly supportive for ELLs. It is especially important to explore such instruction in the Tier One setting given that it is the primary line of instruction for all students, but especially ELLs who may be more likely to be incorrectly identified for reading difficulties based on language differences. Additionally, it is possible that ELLs require different instruction than EOs in a Tier One settings. Yet, research suggests that in upper-elementary general-education settings teachers provide very little differentiated instruction for ELLs and EOs (Silverman et al., 2014).

With roots in social learning theory and social constructivist theory, explicit instruction delivered through the gradual release of responsibility seems like a promising model for all students, regardless of their language proficiency. In such a model the teacher demonstrates, thinks aloud, and interacts with students as she guides students through strategic reading of text. This model of instruction allows teachers to regain or loosen control of instruction in order to best support learners needs. Since explicit instruction of reading comprehension strategies has been documented as effective in intervention research conducted in populations of students who struggle with reading comprehension, and often have differing levels of language than peers, it is relevant to explore such a model in a general classroom setting with many ELL students. In studies of language acquisition, a more explicit model of instruction, with a focus on scaffolding

and modeling, is suggested as highly supportive (e.g., McNeil, 2011; Reznitskaya, 2012; Walqui, 2006) and is associated with language growth (e.g., Applebee et al., 2003). Thus, it is posited that the same may be true with regard to reading comprehension strategy instruction. That is, there may be a different relationship between instruction and outcomes for students of different language backgrounds.

Review of Empirical Studies

This literature review was guided by the belief that a) social learning theory and social constructivist theory and b) explicit instruction and the gradual release of responsibility provide essential underpinnings to the instruction of reading comprehension. As a result, I sought to examine related literature to investigate the instructional practices related to reading comprehension delivered by upper-elementary teachers in general education classroom settings.

I reviewed empirical literature in a general-elementary education classroom setting (i.e., natural classrooms with instruction provided by the classroom teacher of record and not intervention programs designed by researchers) in order to understand the instructional practices related to reading comprehension that were present in upper elementary (i.e., grades three through five) natural settings. Subsequently, I sought to explore if there was an established relationship between reading comprehension instruction and students' reading comprehension outcomes. Embedded in this search was an interest in the presence of explicit instruction and the established relationship between teachers' explicit reading comprehension instruction and students' reading comprehension outcomes.

With the promise of explicit instruction of reading comprehension with ELLs, an additional aim of this review was to understand if students of diverse language and socioeconomic backgrounds were included in these studies. And, if there were students of

diverse backgrounds represented in these relational studies, if results, related to relationships between teacher practice and student outcomes, were disaggregated by students' language backgrounds. Finally, by exploring how these research questions were addressed in the extant literature, I sought to identify the strengths and limitations in the literature that informed my research study.

In order to explore these topics, I found I had to expand my search to include some studies that were not solely focused upon reading comprehension instruction, and studies that examined reading comprehension instruction in general classroom settings, but not solely focused on explicit models of reading comprehension instruction. I had to broaden my search because when I limited my search to only reading comprehension instruction my results were too few to make inferences based on previous findings. Second, I found that I was eliminating key studies that would better inform my own research questions. In this section, I first provide a description of the methods and criterion I used to identify the literature included in this review. Then, I describe the content of the nine studies identified through my search. Finally, I synthesize and critique the reviewed literature to identify strengths and limitations of the reviewed literature. See Appendix A for a summary of findings from the literature review.

Search criteria. In order to locate literature to explore the guiding questions of this review, I conducted a two-step, electronic search for articles published in peer-reviewed journals using the Education Resources Information Center (ERIC), PsycInfo, Academic Search Premier and Education Research Complete databases. To be included in this review, an article had to meet the following criteria:

1. Publication in a peer-reviewed journal
2. Publication written in English and instruction conducted in English

3. Observations included observing reading comprehension instruction
4. At least one classroom that researchers observed consisted of upper-elementary (i.e. third-fifth grade) students.

In order to explore the questions guiding the review, I conducted two separate, but related searches. First, I created a list of key search terms and roots related to each research question. I generated these terms and roots based on the terms and roots used in previous literature, a consultation by a research librarian with a specialization in educational research, and review by experts in the reading field.

To explore questions one and two, that were related to the types and explicitness of instruction, and the outcomes related to instruction I entered combinations of the following terms and roots: "reading comprehen*" OR comprehension AND elementary AND observation. To explore RQ1a, I conducted an additional search with the terms and stems above with the addition of "explicit instruction" and "explicit". I reviewed the abstracts and only narrowed the articles that were found based on the criteria above resulting in those studies included in this review. To address research question three, that was related to students' language background, I conducted a search with the following search terms and roots: "reading comprehen*" OR comprehension AND "Limited English proficien*" OR "LEP" OR "language minority" OR "ELL" OR "EL" OR "English learn*" OR "English language learn*" OR "ESOL" OR "second language learn*" OR "ESL" OR "English as a second language" OR "bilingual" or "linguistically diverse" OR "dual language learn*" OR "multilingual" OR "culturally or linguistically diverse" AND observation. The number of search terms related to language status was large, a result of the many terms used to describe students from non-native English speaking

backgrounds. As with the first search, I reviewed the abstracts and narrowed the articles that were found based on the criteria above resulting in those studies included in this review.

As a result of both of these searches I located nine articles that met my criteria for inclusion in this review. These nine articles are categorized, described, analyzed, and critiqued in the following sections.

Review of literature findings. In this section, I include the relevant literature related to observations of reading comprehension. I begin by reviewing three studies that were conducted to understand general reading instruction in elementary classrooms: these studies did not address reading comprehension specifically, but they are included because they revealed important information about the role of reading comprehension instruction within the context of general reading instruction. I then review seven studies in which researchers specifically observed reading comprehension instruction in upper-elementary classrooms. Here, the studies are divided into two sections: observation only studies and studies that explored the relationship between the observed instructional practice and students' reading comprehension outcomes. I synthesize the studies, analyze limitations, and suggest future research directions throughout this section.

General reading observation studies. As previously noted, the initial goal of this literature review was to examine literature specific to observations of reading comprehension instruction in upper elementary general education classrooms. However, while searching for appropriate literature, three studies emerged that, while not solely focused on reading comprehension instruction, were included because they were observation studies of general reading comprehension, and thus examined reading comprehension instruction in a general education setting. These three studies are described and synthesized below.

Pressley, Wharton-McDonald, Mistretta-Hampston, and Echeverria (1998) conducted classroom observations to understand what literacy instruction occurred in fourth and fifth grade classrooms in an attempt to identify the components of instruction that were observed most and least consistently across the observed classrooms. The researchers observed 10 teachers from four different school districts that represented urban, suburban and rural settings and served both lower and upper middle class students. The researchers identified teacher participants through district coordinators who determined each teacher participant as effective "at helping students develop appropriate literacy skills and behaviors"(p.163). Researchers were guided by the grounded theory approach and thus data collection and analysis were conducted simultaneously.

Researchers observed instruction twice a month (over six months) for each teacher. Observations ranged from 50 - 150 minutes each. Researchers recorded field notes about the activities in the classrooms and completed transcripts of teacher interviews. The researchers analyzed transcripts and field notes in order to develop a coding scheme. Codes in the following categories emerged: activities, class grouping, instructional objectives, teacher affect, student affect, teacher language, student language, materials, and classroom arrangement. Summaries of instruction in each classroom were also written. Across classrooms of these teachers nominated as effective, researchers observed authentic activities, some explicit skills instruction, many opportunities to read and write, access to trade books, and chances for independent reading. Specific to reading and reading comprehension, a similarity across classrooms was the observation of literature-based instruction, skills instruction, reading during class, explicit vocabulary instruction, and small group reading instruction. Teachers often guided students through discussion about text by asking questions. During interviews, many teachers noted the importance of using strategies to help the students comprehend text. However, researchers

observed "practice of comprehension of strategies, but virtually no instruction in strategy use" (p. 170). In fact, some of the greatest observed differences across classrooms were a) the role teachers played in discussions about text; b) how much strategy instruction took place; and c) how much scaffolding and modeling (related to strategy use), that teachers provided.

Also interested in examining the practices of teachers in effective schools, Taylor, Pearson, Clark, and Walpole (2000), observed elementary school teachers during literacy instruction. However, unlike Presley et al., (1998), Taylor et al. were specifically interested in understanding the practices of teachers in high-poverty schools. Participants included two teachers in each of the grades from kindergarten to third grade in 14 schools spread across the United States. Researchers rated each school as most, moderately, and least effective by examining a number of primary-grade reading achievement measures. In addition to teacher participants, the researchers recruited two low and two average readers in each classroom to be tested on reading accuracy, fluency, and reading comprehension measures at the beginning and end of the school year. Researchers observed each teacher five times during an hour of reading instruction and recorded classroom dialogue, general classroom activity, the level of involvement of students in the lesson, and any other notes about events with the potential to impact instruction. In addition to these general observations, every five minutes, researchers also coded for coaching/scaffolding, modeling, engaging the children in recitation, explaining how to do something, or engaging the children in discussion. At the end of each lesson the researcher wrote a reflective summary of the observation to include information about general impressions, teacher instruction and interaction with students, level of student engagement, management, and overall environment.

Researchers also asked teachers to keep a log of all instruction activities during a week at two time-points. Additionally, researchers administered surveys to teachers and principals and conducted interviews with teachers and principals in order to gain more insight into the participating teachers' beliefs about how their schools were able to be effective with a traditionally underperforming group of students. Researchers measured students reading comprehension with the Qualitative Reading Inventory-II (QRI, Leslie & Caldwell, 1995). In this assessment, students read aloud text passages while teachers recorded oral word reading accuracy and fluency. Then students provided a retell of the text, which teachers scored on a four-point scale.

Through analysis of variance and Tukey's post hoc analysis, findings indicated that the statistically significant teacher factors related to students' outcomes included small-group reading instruction, time for independent reading, high-levels of on task-behavior, and home-school connections. Additionally, explicit instruction of phonics, with attention to coaching students to use strategies in authentic reading tasks was important. Related to reading comprehension, eight instructional practices were seen during observations: picture walks; making predictions; text-based questions; higher-level questions; aesthetic-response questions; writing in response to reading; story map; retell a story; and comprehension skill or strategy instruction. In addition, instructional strategies that were observed in 10 or more classrooms included: text-based questions; higher-level questions; and writing in response to reading. Teachers in the most-effective schools devoted time to high-level questions while discussing texts and often directed students to write in response to reading. Additionally, positive student literacy outcomes were related to higher frequency of teacher scaffolding and coaching. On the

other hand, a negative relationship was established between instruction related to comprehension skills instruction and overall literacy achievement.

Also interested in general literacy instruction, Bitter, O'Day, Gubbins, and Socias (2009) examined the literacy instruction in a large school district comprised of high poverty elementary schools with large percentages of English learners (between 25% and 79% of students). They were concerned with how the district's curriculum was associated with students' literacy achievement. Observations occurred five times over the course of two years, with each observation lasting around 90 minutes. During the observations, observers took running notes in five-minute segments in order to record classroom activities and talk. Additionally, after every three five-minute segments, researchers coded the "accountable talk" (1 if scaffolding was observed and 2 if high levels of interaction).

Outcome measures included assessments used throughout the district in which the study occurred. The first measure, the Degrees of Reading Power (DRP), was a district-wide assessment designed to measure students' comprehension in increasingly difficult nonfiction texts. Each short text included missing words. Students were required to select a word to fill each space from multiple-choice answers. The second measure was the reading comprehension subtest from the California Standards Test. Last, the researchers analyzed data from the Developmental Reading Assessment (DRA) that was administered by the district to students in kindergarten through third grades three times during the year. The DRA is an individually administered assessment in which teachers listen to students read aloud while recording students' word reading accuracy and answers to reading comprehension questions. Teachers analyze students' reading and comprehension in order to establish a level for each.

Hierarchical Linear Modeling analyses of instruction and student outcome data indicated that teacher practices related to the higher-level meaning of text, writing instruction, and strategies for accountable talk were associated with growth in students' reading comprehension. While teachers in this study incorporated more telling than scaffolding during instruction, similar to the findings in Taylor et al.'s (2000) work, Bitter et al. (2009) established a positive relationship between teacher's coaching and scaffolding and students overall literacy achievement. An additional similarity in findings to Taylor et al.'s work was the negative relationship between comprehension skill instruction and students' overall literacy achievement.

Bitter, et al.'s (2009) student sample consisted of a large population of ELLs, and thus, they were able to disaggregate some of their findings to uncover relationships between teachers' instruction and ELLs achievement outcomes. Pertinent to this paper, although there was a positive relationship between instruction related to higher-level meaning of text and overall student literacy outcomes, this relationship was negative for ELLs.

Summary and critique of general reading observation studies. Although the studies presented in this section were not specifically focused on reading comprehension, the observations conducted during reading instruction revealed reading comprehension instruction practices that occurred most frequently, as well as trends in relationships between those practices and students' outcomes in reading comprehension. In addition, one study (Bitter et al., 2009) included a large population of ELLs in their sample, and disaggregated some findings to explore the relationship between instruction and outcomes for ELLs.

Across all three studies presented in this section, researchers noted that effective teachers included opportunities for students to discuss and write about text. In fact, Taylor et al. (2000), and Bitter et al. (2009) both provided data to suggest the relationship between such practice and

student growth in reading comprehension. All three studies also noted high-level questions about text in the context of discussion. However, what was less clear was what was included in such questions, and how and if teachers explicitly guided students to explore or provided students supports to answer such questions. Further analysis of lessons, with a finer grain unit of analysis may provide researchers with more information about how to effectively coach practitioners in guiding discussion about text to improve students' reading comprehension.

Another common finding in these studies was the suggestion that effective teachers included explicit instruction in reading lessons. Pressley et al. (1998) noted that in interviews most teachers noted the importance of children using strategies to understand text, and that some effective teachers included explicit instruction. However, one of the greatest differences across classrooms was the inclusion of explicit comprehension strategy instruction, and how much scaffolding and modeling teachers provided. Taylor et al. (2000) and Bitter et al. (2009) reported that teachers in their studies more often included instruction that related to telling than scaffolding. However, Taylor et al. (2000) and Bitter et al. (2009) documented a positive relationship between scaffolding, or coaching of comprehension strategies, an element of explicit instruction, and student literacy outcomes.

Although there was a positive relationship between scaffolding and students' literacy outcomes in both studies (i.e., Taylor et al., 2000; Bitter et al., 2009), researchers also established a negative relationship between the amount of comprehension skills instruction and overall reading achievement. This finding may be related to Pressley et al.'s (1998) finding that teachers often expected or told children to implement some specific reading comprehension strategy, but did not provide instruction on how to do so. In other words, telling children to use a strategy likely requires more instruction, as in the full model of explicit instruction (i.e., modeling,

guiding practice, etc.), in order for children to improve overall reading comprehension and reading achievement. This hypothesis may also be related to the finding that higher-level discussion of text, as reported in Bitter et al.'s (2009) work was associated with negative reading outcomes related to reading comprehension skills for ELLs. Perhaps ELLs required more explicitness of instruction to benefit from these higher-level discussions as much as their peers did.

Thus, further research should explore both the content of reading comprehension instruction as well as delivery of reading comprehension instruction. In all three of the studies presented in this section, researchers were concerned with reading instruction as a whole. As such, data collection and analysis was conducted in a more general manner. The current study aims to fill the gaps left in the studies reviewed in this section by examining the delivery of instruction of comprehension strategies (e.g., summarization, making inferences) to better understand the relationship with all children's but especially ELLs' comprehension outcomes.

Reading comprehension specific studies. In this section, I review the few studies that specifically examined teachers' instruction of reading comprehension in upper elementary schools. I have divided these studies into two categories: studies that included observations only, and studies that related reading comprehension instruction to students' reading comprehension outcomes.

Observations only. In her work over 30 years ago, Durkin (1978/1979) investigated the comprehension instruction that took place in elementary school classrooms. In her seminal work on reading comprehension, Durkin (1978/1979) provided two definitions of reading comprehension. Durkin established eight categories related to teacher behaviors related to comprehension instruction as well as additional categories to capture teacher behaviors related to

phonics, structural analysis, vocabulary (labeled as "word meanings"), assignments (not related to comprehension), study skills, transitions, and non-instruction. Then, Durkin conducted classroom observations of literacy and social studies instruction to understand a) if comprehension instruction took place in elementary classrooms, and b) how much time was devoted to reading comprehension instruction. To investigate these questions, Durkin conducted three sub-studies, which she synthesized and reported about in this paper (Durkin, 1978/1979). First, she concentrated specifically on exploring the *types* of reading comprehension instruction that teachers provided in fourth grade classrooms. Second, she examined third through sixth grade teachers across schools to determine if teachers in different schools differed in the *time* spent on comprehension instruction. Third, and outside of the purpose and scope of this review, Durkin tried to understand how children perceived reading programs.

To conduct these three sub-studies, Durkin visited classrooms on three days in a row. Durkin asked principals to allow her to observe their "best" teachers during reading and social studies instruction. During observations, the researcher and her assistants recorded the time of each activity, the type of activity, the audience for the activity, and the source of instruction (i.e. workbook or manual).

Durkin recorded 4,469 minutes of reading instruction and 2,775 minutes of social studies instruction in 24 fourth-grade classrooms across 13 different school systems in Illinois. Durkin found that less than one percent (28 minutes total) of instruction provided by these observed fourth-grade teachers was devoted to comprehension instruction. However, 17.65 % of all this instruction was related to comprehension assessment. This type of instruction occurred most often in the form of teachers asking questions in an initiate-respond-evaluate model. In this

model, a teacher generally asked a question about the text, a student provided an answer to the teacher's question, and the teacher provided a response in the form of yes or no, or some other response to evaluate the correctness of a student's response.

Over thirty years later, Ness sought to explore if reading comprehension instruction had evolved in the years following Durkin's work. In an observational study of 20 first- through fifth-grade classrooms Ness (2011) studied the frequency of reading comprehension instruction; the percentage of instruction time spent on reading comprehension instruction; and types of instructional strategies implemented by teachers. Observations were conducted at two schools, one suburban school and one urban charter school. Teachers at the suburban school provided literacy instruction with a basal reader for 90 minutes per day and the urban charter school provided 180 minutes of literacy instruction per day using chapter and picture books. Ness observed each teacher participant for a total of 120 minutes divided into five thirty-minute blocks. During observations the researcher applied a coding scheme that consisted of two main categories, comprehension instruction and non-comprehension instruction. Comprehension instruction codes, pre-established based on the extant literature, consisted of vocabulary instruction, predicting/prior knowledge, comprehension monitoring, text structure, question answering, question generation, summarization, visual representations, and multiple strategy instruction. However, these codes were only applied when one of the following explicit instruction behaviors, based on the Gradual Release of Responsibility (Duke & Pearson, 2002), was observed: explicit description of the strategy and when and how it should be used; teacher and/or student modeling of the strategy in action; collaborative use of the strategy in action; guided practice using the strategy with the gradual release of responsibility; or independent use of the strategy. Researchers coded behaviors in 30-second increments and at the end of the 30-

minute observation the codes were tallied. When the teacher separated the class into different groups, the observers followed and observed the teachers' actions.

Ness recorded 751 minutes of comprehension instruction accounting for 25% of all observed instruction. Ness noted different amount of time spent on comprehension instruction by grade level. Specifically, first-grade teachers provided 142 minutes of comprehension instruction, second-grade teachers provided 174 minutes, third-grade teachers provided 67 minutes, fourth-grade teachers provided 287 and fifth-grade teachers provided 122 minutes of comprehension instruction. Across grades the strategy teachers favored most was asking questions (8.5% of instruction across grades); followed by making predictions/activating prior knowledge (6.1% of instruction across grades); summarization (3.4% of instruction across grades); vocabulary instruction (2.8% of instruction across grades); text structure (2.2 % of instruction across grades); visual representations (1.1% of instruction across grades); comprehension monitoring (0.6% of instruction across grades); question generation (0.2 % of instruction across grades), and multiple strategy instruction (0.0% of instruction across grades). In sum, although Ness noted much more instructional time devoted to reading comprehension instruction than Durkin (1978/1979) did, over thirty years later, Ness noted that teachers continued to favor questioning students about text during instruction.

Somewhat similar to Ness' (2011) work, Parker and Hurry (2007) examined how explicitly teachers in 51 London Key Stage 2 (roughly equivalent to U.S. grades 2-6) classrooms taught reading comprehension strategies. Researchers observed and video-recorded each teacher's instruction during one literacy class. Teachers' literacy classes ranged from 45 minutes to one hour. In addition, researchers conducted interviews with each participating teacher. The goal of the interviews was to collect information about teachers' beliefs about strategies that they

believed to be important to teach students in order to comprehend text. Both interview and observation transcripts were coded using content analysis. Researchers organized data from the interviews into three categories: direct questioning, specific teaching, and other teaching methods. Similarly, researchers organized teacher/child interactions during observed lessons into four categories: teacher questioning, teacher modeling, teaching explicit strategies, and pupil questioning. Teacher questioning included instances in which teachers asked students a direct question. Teacher modeling included times that teachers modeled a reading comprehension strategy while reading a text. Instances that were coded as "teaching explicit strategies" consisted of a teacher providing a comprehension strategy for students to apply. When an instance was coded as pupil questioning, a student asked a question about the text. Data was then analyzed for the frequency (and percentages) of interview references to a certain category, and likewise with observations.

Findings indicated that teachers heavily favored direct questioning for comprehension instruction as recorded in both interviews and observations. During interviews, teachers mentioned that they most often directly questioned about literal information (recall of fact, 21%; narrative (i.e., what is this about), 24%; bibliographic information, 3%), followed by inferential questioning (deductive, 16%; prediction, 15%; empathy/characterization, 16%; open-ended, 3%), and evaluative questioning, 2%. These interview findings were consistent with what was observed during lessons. In fact, 70% of observed interactions during lessons were related to direct questioning, 22% were related to modeling comprehension strategies ("other than by asking question", p. 307), in 3% of interactions teachers provided children with explicit strategies for comprehension, and in 5% of interactions children asked questions about text. More specifically, with relation to direct questioning, 50% of these instances were related to

questioning at the literal level (e.g., direct recall of factual information); 48% was related to questioning at the inferential level (e.g., deductive inferencing, predictions); and 2% was related to evaluative information (e.g., information about genre or point of view of author). At a more qualitative level, researchers noted that although teachers modeled comprehension strategies they did not make the strategies explicit or guide students to ask their own questions about text.

Summary and critique of observation-only studies. The studies presented in this section explored reading comprehension with a narrower lens than did the studies in the previous section. In this section the researchers were focused on both content of instruction, or what is taught, and delivery of reading comprehension instruction, or how it is taught. Yet, similar to the previous section, the combination of the two elements- content and delivery- still begs to be explored. Furthermore, none of the studies described in this section reported on the relationship between reading comprehension instruction and student outcomes. And, related to ELLs, no researchers in this section reported on the language background of their student participants. The present study aims to concurrently explore the content of instruction, specifically reading comprehension strategy instruction, and the delivery of instruction, specifically explicit and skills-based practice. An additional goal is to explore the relationship between type of delivery of instruction and student outcomes, with a special interest in whether or not the relationship differs for students of different language backgrounds.

Across the studies presented in this section, the researchers explored the change in the amount of reading comprehension instruction over time, as well as the types of reading comprehension teachers provided. Durkin's (1978/1979) work highlighted the little attention paid to reading comprehension instruction in elementary classrooms, and within this reading comprehension instruction, that assessment was most emphasized. Forty years later, Ness noted

that the landscape changed, with about one-fourth of reading instruction devoted to reading comprehension instruction. Ness (2011) also extended Durkin's work to examine the reading comprehension instruction across first through fifth grade classrooms, an important contribution given that the amount of comprehension instruction varied greatly across grade levels.

Related to content of instruction, across the three studies, researchers noted that teachers favored asking children questions about the text they read. Durkin (1978/1979) noted that of the less than one percent of instructional time devoted to reading comprehension instruction, the majority of instruction was allotted to teacher questioning. Parker and Hurry found that 50% of instruction had to do with direct questioning and Ness found that 25% of time was for direct questioning. While Durkin did not observe much variation in the content or delivery of reading comprehension instruction, Ness (2011) and Parker and Hurry (2007) did. In addition to questioning, they observed instruction related to practices as established as effective (e.g., NICHD, 2000; Rand, 2002) such as predicting, previewing, summarization, visualization, monitoring and more. However, Ness was concerned more with content of instruction and Parker and Hurry were more concerned with the delivery of instruction.

Thus, Ness' (2011) and Parker and Hurry's (2007) work extended Durkin's work, and filled a gap in the literature left by the studies reviewed in the previous section (Bitter et al., 2009; Pressley et al., 1998; Taylor, et al., 2000) as they examined the presence of instruction of reading comprehension strategies that had been established as effective in the extant *intervention* research. However this research is limited in that it was a) not related to student outcomes and b) that although it was called "explicit instruction" not all elements of the Pearson and Dole's (1987) and Duke and Pearson's (2002) models of explicit instruction needed to be present to be coded as explicit instruction. Ness coded instructional activities as explicit if just one element of

the model was present and Parker and Hurry coded separately for "teaching explicit strategies", teacher modeling, and teacher questioning. Although all aspects are important to instruction, explicit instruction is a model that rests on multiple elements of instruction to be successful. As noted before, more understanding of this model of explicit instruction should be examined with more attention to the model as a whole, the relationship between explicit instruction and student outcome and how this type of instruction is related to outcomes for ELLs. Thus, the present study aims to examine the explicit instruction model as a whole and in parts to understand the relationship between instruction and practice, with a special interest in this relationship with regard to ELLs.

Reading comprehension instruction related to student outcomes. In the review thus far, I have reported on studies that examined reading comprehension instruction embedded in general reading instruction, and studies that specifically observed reading comprehension practices of elementary teachers. Amongst the later studies researchers did not investigate the relationship between reading comprehension practices and students' reading comprehension outcomes. In this section, I report on three studies that sought to fill this gap in the literature.

Carlisle, Kelcey, Berebitsky, and Phelps (2011) developed a study to inquire about their framework of three theoretical dimensions of reading comprehension instruction: pedagogical structure, teacher-directed instruction, and support for student learning. Using this framework, they sought to understand the ability to measure each theoretical dimension of comprehension instruction and the characteristics of classrooms (teachers and students) that were associated with reading instruction related to each of the three dimensions. Additionally, the researchers examined the extent to which the teachers' observed instruction accounted for students' reading comprehension performance and if there was a relationship between student characteristics (e.g.,

poverty indicators) and achievement in reading comprehension. To explore these questions, Carlisle et al. observed 44 third grade classrooms four times across a school year. Unlike many of the other studies reviewed thus far, Carlisle et al. noted that the student population was comprised of a substantial group of ELLs (18% of the students).

Teachers' instructional actions were examined using a framework that included attention to pedagogical structure, teacher-directed instruction, and support for student learning. Pedagogical structure focused on anything that teachers did to draw students' attention to the "purpose and structure of a given lesson" (p. 412). Examples included giving directions about class activities and explaining lesson objectives. Teacher-directed instruction related to the way in which teachers promoted literacy skills in a clear presentation. Examples of such instruction included providing explanations, modeling comprehension strategies, and guiding practice. Support for student learning was described as ways in which teachers "engage(d) students in the lessons, assess(ed) their response to content and activity of a lesson, and ma(de) use of students' skills, strategies, and knowledge" (p. 413). Coding was applied during five-minute intervals. Codes included: purpose of the lesson, instructional activities, word meaning activities, grouping of lesson, materials used during the lesson, and mean number of students participating.

Student reading achievement was measured the end of the academic year with the Iowa Tests of Basic Skills (ITBS) reading comprehension subtest (test reliability for third grade is 0.91 measured with the Kuder-Richardson formula). On this subtest, students selected answers to questions that assessed comprehension of a short passage. Prior reading achievement was controlled for using scores from ITBS reading comprehension subtest from the previous two years as well as the Oral Reading Fluency (ORF) score from the Dynamic Indicators of Basic Literacy (DIBELS) from the fall of third grade.

The researchers noted that of all lessons observed, teachers delivered 287 reading comprehension lessons, which accounted for about one-fourth of all observed lessons. On analysis, the researchers found that teachers did not vary significantly in the lessons taught at the beginning of the year to the end of the year, indicating that the reading comprehension lessons teachers taught were stable across the year. However, there was great variation in their use of instructional actions (as outlined above).

Through a multivariate, multilevel Rasch measurement model, the researchers indicated that teacher knowledge contributed to all dimensions of the theoretical framework; however this contribution was associated positively with support for student learning and pedagogical structure, but negatively with teacher directed instruction. Also related to reading comprehension findings was that student characteristics affected teachers' instruction. Teachers with more students from minority backgrounds used elements of teacher directed instruction more often than supports for student learning and pedagogical structure.

With regard to student reading comprehension outcomes, when teachers engaged in teacher-directed instruction and provided supports for learning students' reading comprehension was impacted. Related to student background and the relationship between teacher instruction and student growth, students from lower socioeconomic (SES) backgrounds (as determined by free and reduced meals program eligibility) benefitted from instruction that was teacher directed and included supports for student learning, more than their peers from higher SES backgrounds.

Similar to the other research presented in this section thus far, Connor et al., 2004 explored the relationship between language arts instruction and students' change in reading comprehension. Specifically they sought to establish how student characteristics (i.e., vocabulary, decoding, reading comprehension, SES status, home literacy environment, and

parents' education) at the beginning of third grade affected reading comprehension growth. They also explored the effect of teachers' instruction, related to four dimensions, on students' reading comprehension growth. Dimensions included *implicit* (i.e., activities not specifically focused on reading comprehension such as independent reading) versus *explicit* instruction (i.e., instructional strategies such as summarizing, predicting, questioning), *child-managed* (e.g., independent reading and writing, worksheet completion) versus *teacher-managed* (e.g., teacher-led discussion, modeling, read alouds), instruction. Additional dimensions were *word level* (e.g., alphabet, letter-sound) versus *high order* (e.g., reading comprehension, vocabulary) and *change in amount of instructional activities over the school year*. Finally, they wanted to explain if the effects of instruction depended on children's beginning of year characteristics.

Connor et al. (2004) conducted three daylong observations of 43 third-grade classrooms in the fall, winter, and spring. During observations, the researchers recorded timed-narrative descriptions of any instructional activity lasting a minute or more. Then these observation narratives were coded to document the content of instructional activity (e.g., language arts, social studies) and subactivities (e.g., read aloud, reading comprehension strategy). The 19 activity and 99 subactivity codes reflected both what was observed during instruction and the curriculum guides used in the district in which the study took place. Language arts subactivity codes were categorized according to dimensions of instruction (described above).

Results indicated that although in general the student participants gained the equivalent of one-year growth in reading comprehension, results varied greatly and depended on students' fall profile. For instance, students with higher reading comprehension and vocabulary scores exhibited greater growth. Although time devoted to instruction did not vary greatly, type of instruction did. Researchers most often observed child-managed higher order instruction (about

50 minutes/day) and much less teacher-managed explicit instruction (about 20 minutes/day). They observed fewer than 10 minutes per day of instruction related to child-managed explicit instruction, teacher-managed implicit higher order instruction, teacher-managed implicit word level instruction, and child-managed implicit word-level instruction. Related to teacher-managed explicit instruction, activities included most often were: conventions of text and teacher-managed discussion. Less than one minute per day was devoted to teacher-managed reading comprehension instruction. However, on average, five to six minutes per day were devoted to child-managed reading comprehension activities (e.g., completion of a worksheet related to something they read).

Connor et al. (2004) measured student progress using a number of measures: the Peabody Individual Achievement Test-Revised (PIAT-R) Reading Comprehension, Reading Recognition, and General Information subtests and the Peabody Picture Vocabulary Test-Revised. Related to reading comprehension, Connor et al. examined the PIAT-R Reading Comprehension subtest in which students read sentences silently and then selected on picture (out of four) that matched what they read.

Though they observed much variation in instructional practices, they did not observe a significant change in total time spent on language arts instructional activities across the school year. However, using hierarchical linear modeling, they did find a relationship between students' beginning of the year profile and teachers' instruction. Children with average and below-average beginning of year reading comprehension profiles exhibited more growth in classrooms with more teacher-managed explicit instruction and less child-managed explicit instruction. However, students with a higher beginning of the year reading comprehension profile exhibited more growth in classrooms with more child-managed explicit instruction.

Silverman, Proctor, Harring, Doyle, Mitchell, and Meyer (2014) investigated the relationship between teachers' instruction and third through fifth grade students' vocabulary and comprehension outcomes. They were also interested in the whether the relationship between teachers' practice and student outcomes differed for students of EO and Spanish-English ELL language status. The researchers observed and transcribed three (fall, winter, spring) Reading/Language Arts lessons in 33 classrooms. In addition, they assessed 274 students on measures of vocabulary and comprehension at the beginning and the end of the school year. In total, 44.9% of their sample was designated as bilingual, their definition of an ELL. Note in the present study I use ELL to describe any student whose parent designated that a language other than English was spoken in the home, the same definition Silverman et al. used to describe bilinguals.

The researchers coded lesson transcripts at the level of teacher utterance (e.g., questions, comments, prompts) to "quantitize" (Tashakkori & Tedlie, 1998) the instruction in categories of vocabulary instruction, comprehension instruction, other instruction, or non-instruction. Initially, the researchers applied codes to each teacher turn (i.e., "a segment of teacher speech bounded on each side by student speech" p. 7) as the unit of analysis. However, because they noted that multiple types of instruction often appeared within a single teacher they believed they were not accurately capturing all instruction. Thus, they established a finer grain unit of analysis, specifically "teacher utterance" for coding. They used Crookes' (1990) definition of an utterance, "a unit of speech under a single "breath group" or intonation contour that is bounded by pauses on either side" (p. 194). When they implemented this unit of analysis they noted that teachers generally implemented one unique type of instruction per utterance. Furthermore, they found that across all lessons, 75% of utterances across all lessons were

attributed to teachers. On average, teacher utterances were more than four times as long as student utterances.

Additionally, they identified five sub-categories of teacher utterances within vocabulary-related instruction and five sub-categories within comprehension-related instruction. Related to comprehension instruction, attention to literal comprehension (m=34.33) was observed most frequently followed by attention to inferential comprehension (m=26.11), comprehension strategies (m=26.26), text elements (m=22.63), and lastly decoding/fluency (m=6.20). Researchers coded instruction as literal comprehension instruction when teachers asked about or pointed students toward literal information in a text. They applied the inferential comprehension code when teachers guided or asked children to use context clues or information to make an inference. They coded for comprehension strategies when teachers modeled or used, or asked children to use strategies such as previewing, activating prior knowledge, monitoring, visualizing, or summarizing. Application of the text elements code occurred when teachers discussed, guided or asked children to use features of text (e.g., story elements, genre, text structure).

In order to investigate the relationship between instruction and a wide range of reading skills, the researchers assessed participating students with a number of norm-referenced vocabulary and comprehension measures in the fall and spring of an academic year. Comprehension measures included the WMLS Passage Comprehension (Woodcock et al., 2005) subtest, the Gates-MacGinitie Reading Test, Fourth Edition (GMRT; MacGinitie, MacGinitie, Maria, & Dreyer, 2002) reading comprehension subtest, and the Test of Sentence Reading Efficiency and Comprehension (TOSREC; Wagner, Torgesen, Rashotte, & Pearson, 2010). Silverman et al. (2014) administered the WMLS Passage Comprehension subtest (Woodcock et

al., 2005) individually to assess students' sentence and passage level comprehension under untimed conditions. This assessment includes cloze passages that increase in difficulty. For children between the ages of 7 and 13 internal reliability is .80-.94 (Woodcock et al., 2005).

Research assistants (RA) administered the Gates-MacGinitie Reading Test, Fourth Edition (GMRT; MacGinitie, et al., 2002) reading comprehension subtest in a group-based setting during a 35-minute time period. During this assessment, students silently read a series of grade-level appropriate passages and then answered multiple-choice questions (including explicit and implicit questions) about the passage. For third through fifth grades the Kuder-Richardson Formula 20 (K-R 20) reliability coefficients of the GMRT are .92-.93 (MacGinitie et al., 2002). For alternate forms the reliabilities are 86-.87 for the same grades (MacGinitie et al., 2002). Administration fidelity was at least .90 on all measures.

Using latent difference modeling, the researchers reported how the frequency of the various types of instruction was associated with students' change in vocabulary and comprehension from beginning to end of the school year. With regard to comprehension, teachers' instruction related to inferential comprehension was positively associated with change in comprehension but no other relationships between comprehension and overall student growth were established. However, an interaction between language status and teachers' instruction of comprehension strategies was associated with greater positive change in comprehension for Spanish-English bilingual students but not for EO students.

Summary and critique of reading comprehension studies that examined the relationship between instruction and student outcomes. The studies examined in this section extend previous work as they examined reading comprehension instruction at a deeper level, and furthermore related teachers' instruction to students' reading comprehension outcomes. Yet, gaps in the

literature presented still exist, especially as related to exploring content of instruction and delivery of instruction simultaneously.

What is clear from the studies presented in this section is that teachers vary in the type of reading comprehension instruction that they present, and that different types of reading comprehension instruction are related to students' reading comprehension growth. Moreover, some of the research suggests that students from different backgrounds respond differently to different types of reading comprehension instruction. Across these three studies (Carlisle, et al., 2011; Connor et al., 2004; Silverman et al., 2014, there was much discussion about "teacher-directed" or explicit instruction of strategies. However, again, as I mentioned in earlier critiques of studies, there is overlap between conceptualizations of explicitness of instruction, even within studies. For instance in Carlisle's study (2011), the researchers noted that there was overlap among the three dimensions of their model. Thus, it is not entirely clear how pedagogical structure, teacher directed instruction, and supports for student learning were different. Connor et al. (2004) included a dimension of explicit instruction—which was related to students' change in reading comprehension outcomes—but their definition of explicit instruction differed from Carlisle's as they defined instructional activities that related to research-based strategies, such as summarization and predictions.

Just as some studies focused on the method of delivery (Carlisle, et al, 2011; Connor et al., 2004), Silverman et al. (2014) aimed to look specifically at the contributions of the content of instruction, specifically reading comprehension strategies to overall student growth. However, this study was limited in that the coding did not account for the method of delivery of instruction (e.g. scaffolding, telling). Thus, a limitation of the extant literature is that studies focus on either

content of delivery or method of delivery but not both together with a fine-grained unit of analysis.

Lastly, although Carlisle et al. (2011) noted that their sample include 18% ELLs, they did not disaggregate their findings to indicate which methods of delivery were most effective for this population of students. Although Silverman et al. (2014) disaggregated their findings to expose the relationships between instruction practice and student's reading comprehension outcomes, these findings were limited to the content of instruction. Given the gaps identified in these studies, the present study aims to examine delivery of instruction (i.e., skills-based or explicit instruction) of research-based reading comprehension strategies (content of instruction) and the relationship to student outcomes. Of additional interest is whether the relationship between instruction and outcomes differs by students' language background.

Synthesis of findings from the review of literature. In the previous section I presented a number of studies that examined reading comprehension instruction in the context of a general education classroom setting. Some of these studies explored reading comprehension as a part of general reading/language arts instruction (Bitter et al., 2009; Pressley et al., 1998; Taylor et al., 2000) while others had a more specific focus on reading comprehension instruction (Carlisle, et al, 2011; Durkin, 1978/1979; Kelsey & Carlisle, 2007; Parker & Hurry, 2007; Ness, 2011; Silverman et al., 2014). In addition, some studies explored the method of delivery of instruction (e.g., Carlisle et al., 2011; Connor et al., 2004; Parker & Hurry, 2007), some sought to record the frequency of specific instructional strategies (e.g., Ness, 2011), and some even attempted to explore the relationship between teachers' reading comprehension instructional practices and students' outcomes (e.g., Carlisle et al., 2011; Connor et al., 2004; Silverman et al., 2014). However, the studies presented in the previous section are similar and different in a number of

other ways specifically related to the questions that guided this review. These similarities and differences are important to unpack, in order to clearly understand the contribution of each of the researchers' findings and also to be able to identify gaps in the current literature that should be explored in future research. Thus, in this synthesis, I identify the trends presented in the corpus of reviewed literature to highlight important points related each of the questions that guided this review of literature. In addition, I discuss the methodological strengths and limitations across studies.

Reading comprehension practices in upper-elementary classrooms. To some degree each of the nine studies reviewed in this paper examined the instructional practices related to reading comprehension instruction in upper elementary general-education classrooms. However, these studies differed in what types of instructional practice they explored—some reported on the content of instructional practices, and others reported on delivery of instructional practices. Related to content of instruction, teachers included many of the practices established as effective through intervention research. Some of these reported comprehension strategies included summarization, previewing and predicting, visualizing, monitoring, questioning.

Although reports of delivery of instruction varied across the studies reported here, related to research question 1a, that explores the relationship between delivery of instruction (i.e. explicit or skills-based) of reading comprehension strategy instruction and students' reading comprehension outcomes, most researchers explored and reported on teachers' use of explicit instruction, to some degree. For instance, Ness (2011) equated explicit instruction with teachers implementing only one element of the model described by Pearson and Dole (1987). Other researchers reported mostly about the scaffolding or modeling (Bitter et al., 2009; Parker & Hurry, 2007; Taylor et al., 2000) and others borrowed elements of explicit instruction, such as

explaining and modeling, to create their own model to understand instruction (Carlisle et al., 2011; Ness, 2011; Parker & Hurry, 2007).

The relationship between reading comprehension instruction and students' reading comprehension outcomes. Of the studies located for inclusion in this review, only five explored the relationship between teachers' reading comprehension instruction and students' outcomes**.** Taylor et al. (2000) and Bitter et al. (2009) documented a positive relationship between scaffolding and students' literacy outcomes and Carlisle et al. (2011) noted that teacher-directed instruction and supports for student learning (which were both defined similarly to scaffolding) was associated with positive reading comprehension outcomes. However, researchers also established a negative relationship between the amount of comprehension skills instruction and overall reading achievement (Bitter et al., 2009; Taylor et al., 2000). Connor et al. (2004) reported that the relationship between reading comprehension and students outcomes' varied based on student profiles such that students who were stronger beginning of the year readers grew more in classrooms that were less teacher-directed. In contrast, students who were less-proficient beginning of the year readers grew more in classrooms with more teacher-directed explicit instruction.

These finding may be related to Pressley et al.'s (1998) finding that teachers often expected or told children to implement some specific reading comprehension strategy, but did not provide instruction on how to do so. In other words, telling children to use a strategy likely requires more instruction, perhaps related to a full model of explicit instruction (i.e., modeling, guiding practice, etc.) in order for children to improve overall reading comprehension and reading achievement. Yet, Connor et al. (2004) noted that lower-performing students grew more in classrooms with more teacher direction and explicit instruction. Thus, because each

researcher employed different units of analyses and conceptualizations of explicit instruction, it is difficult to make generalizations across findings. As such, future research should a) explore content and delivery of instruction with a finer lens of analysis and b) explore instruction within a framework that takes into account all elements of the explicit instruction model (Pearson & Dole, 1987).

Reading comprehension instruction and students of different language backgrounds. Although no researchers sought to compare instructional differences amongst students of varied language backgrounds, some researchers disaggregated their findings by language status. Differences in the relationship between instruction and students' outcomes were distinguished amongst students from different language backgrounds. For instance, higher-level discussion of text, as reported in Bitter et al.'s (2009) work was associated with negative reading outcomes related to reading comprehension skills for ELLs, yet Silverman et al. (2014) discovered that for ELLs only, instruction related to comprehension strategies, was positively associated with reading comprehension growth. These findings could be related to Carlisle et al.'s (2011) findings that suggested that students from lower SES backgrounds (as determined by FARMS eligibility), many of whom were ELLs, benefitted from instruction that was teacher directed and included supports for student learning, more than their peers from higher SES backgrounds. However, these findings are limited in that different units of analysis, and conceptualizations of explicit instruction were used within each study, making generalization across findings difficult. Moreover, none of the studies reviewed examined both delivery and content of instruction together with a fine-grained unit of analysis. It may be that for ELLs, more exploration of not only the content of instruction, but also the delivery of instruction in general-education classroom settings, is needed to understand if the relationship between instruction and students'

outcomes differs for students of different language backgrounds (Gersten et al., 2007; Proctor, Dalton, & Grisham, 2007; Silverman, et al., 2014).

Strengths and limitations of methods. The research presented in this review is representative of varied approaches to and analysis of classroom observation data. Though all of the work presented in this review contributes in important ways to the literature on reading comprehension instruction, the findings must be considered in relation to some of the limitations of the methods used. Because in previous sections of this review I explored the content of the observations in depth (including coding schemes and findings), in this section I will focus on the strengths and limitations of the studies reviewed, with specific attention to the observation data collection, observation unit of analysis, and observation data analysis. See Appendix B for a summary of methods.

*Observation data collection***.** One strength of the observation collection procedures was that most studies visited and conducted classroom observations multiple times in order to gather more information about teachers' instruction. The majority of researchers conducted three observations (Bitter et al., 2009; Connor et al., 2004; Durkin, 1978/1979; Silverman et al., 2014). Two researchers (Ness, 2011; Taylor et al., 2000) conducted five observations each and one conducted four observations each (Carlisle et al., 2011). Parker and Hurry (2007) conducted only one observation of each teacher while Pressley et al. (1998) conducted six observations total. Three observations seems to be widely accepted amongst the reading observation researchers, and thus should be used as a guide for observations in future work.

Not only did the number of observations vary, the length of observations did also. Observations ranged from 30-minute blocks (Ness, 2011); to one-hour (Taylor et al., 2000); to entire literacy blocks (Bitter et al., 2009; Carlisle et al., 2011; Parker & Hurry, 2007; Pressley et

al., 1998; Silverman et al., 2014) to daylong observations (Connor et al., 2004; Durkin, 1978/1979). Some researchers who conducted observations of entire literacy blocks reported that the mean instructional time was 60 minutes (e.g., Silverman et al., 2014) and as a result took the range in observational time into account in analysis through prorating. However, other researchers did not always do the same. Thus, frequency reports and relation to students' outcomes may be somewhat inaccurate due to the inattention to differences in time observed. Future research should take into account differences in time across observation and control for those differences in a manner such as that employed by Silverman et al. (2014).

Data collection also varied in the way in which classroom observation data were recorded for analysis. Two studies (Parker & Hurry, 2007; Silverman et al., 2014) used transcripts of instruction in order to analyze the observations, other researchers recorded field notes or narratives in order to analyze the observations (Connor et al., 2004; Pressley et al., 1998), others coded instruction during the observation (Bitter et al., 2009; Durkin, 1978/1979; Ness, 2011; Taylor et al., 2000), and Carlisle and her colleagues (Carlisle et al., 2011) coded both during and after the observation using field notes. The differences in data collection create limitations about inferences made across studies. Coding while observing presents a few difficulties. First, it is possible that observers could miss important instructional activity while recording notes and trying to apply codes simultaneously. Some researchers attempted to adjust for this complication by time sampling, or observing for a set period of time, and then recoding notes and coding for a set period of time. However, this method limits the total amount of time of observation, as only a sample of instruction is observed. Analysis of transcripts had limitations as well. By analyzing data through a transcript only, it is possible that important contextual classroom information can be missed. However, use of a transcript is a strength in that researchers can use a more finite

unit of analysis that captures teacher talk more accurately, such as a teacher utterance (Silverman et al., 2014).

Unit of analysis. Related to data collection, researchers also varied greatly in their units of analysis. In most studies in this review, the unit of analysis was instructional activity or teacher behavior (Bitter et al., 2009; Carlisle et al., 2011; Connor et al., 2004; Durkin, 1978/1979; Ness, 2011; Taylor et al., 2000). However, researchers were not specific in how great or small an instructional activity could be. For instance, it is possible that an instructional activity could include a brief mention of a particular comprehension strategy, or it could include a twenty-minute lesson on a specific strategy. Thus, future research should employ a finite unit of analysis that allows for a clear definition as well as the ability to examine both the content of instruction and the delivery of instruction. Silverman et al. (2014) implemented such a unit. Though focused solely on content of instruction, by analyzing teacher utterances, the researchers isolated this content in order to understand the proportion of instruction related to each unique code. The use of such a unit in future research will allow for researchers to explore precisely, both content and delivery of instruction.

Coding data. Inextricably linked to the unit of analysis is the method in which researchers coded observation data. Most researchers (e.g., Connor et al., 2004; Durkin, 1978/1979; Silverman et al., 2014; Taylor et al., 2000) applied codes from a preset codebook based on a combination of pilot data and research-based practices as established in the extant intervention literature. Others collected and analyzed data simultaneously (e.g., Pressley, 1998). A strength in both methods is that researchers adjusted their analysis to reflect those practices they actually observed. However, such practice is also limited in a number of ways. First, if data analysis is conducted at the same time as data collection, it is possible that the researcher

could miss important observation information as they analyze the data. Secondly, it is possible that researchers could be biased to be looking for certain data to emerge (e.g., data that supports a research hypothesis). Applying a preset coding scheme could help researchers to avoid such bias. In addition, applying codes post observation, allows for other researchers to establish interrater reliability.

Another difference in the analysis of data was how data was reported in the findings. Some researchers (e.g., Ness, 2011; Taylor, 2000) reported a frequency count of instruction and others reported a value to represent the proportion of instruction of each code. Frequency counts were limited in many of the studies because the amount of observed instructional time varied. Use of a proportion (e.g., Bitter, et al., Silverman et al., 2014) variable is more representative of average instruction across codes and teachers.

Lastly, the observation studies reviewed in this paper provided important insight into practices related to both content and delivery of reading comprehension instruction in elementary classrooms. However, this research is limited as it did not relate those practices to students' outcomes. The researchers (e.g., Bitter, et al., 2009; Carlisle et al., 2011; Connor et al., 2004; Silverman et al., 2014) who did explore the relationship between reading instruction practices and student outcomes established important findings related to both content of instruction and delivery of instruction. Additionally, the findings that suggest that students of different language and reading profiles respond differently to different types of instruction-related to content and delivery- are invaluable. However, future research should aim to continue to explore these important relationships. Specifically, when examining the relationship between reading comprehension instruction and outcomes, researchers should explore how language status interacts with that relationship.

Comprehension outcome measures. In five of the nine studies reviewed (Bitter, et al., 2009; Carlisle et al., 2011; Connor et al., 2004; Silverman et al., 2014; Taylor et al., 2000), the relationship between teacher practice and students' reading comprehension outcomes was explored. However, how students' reading comprehension was assessed varied. In three studies, researchers reported only one comprehension measure (Carlisle et al., 2011; Connor et al., 2004; Taylor et al., 2000), and in two studies researchers used three reading comprehension measures (Bitter et al., 2009; Silverman et al.,. 2014). In addition to a varied number of reading comprehension measures in each study, how reading comprehension was assessed differed. Three assessments measured comprehension at the sentence level (Connor et al., 2004; Silverman et al., 2014), four assessments measured comprehension of short passages (Bitter et al., 2009; Carlisle et al., 2011; Silverman et al., 2014), and two assessments measured comprehension of leveled books (Bitter et al., 2009; Taylor et al., 2000).

Though in the reported measures no one consistent measure was reported, a few suggestions for future research can be made. First, related to the measures reported in these studies, and in line with the definition of reading comprehension guiding this study (i.e., comprehension of units larger than a word), it seems important that studies designed to assess reading comprehension growth should use measures to capture text at both the sentence and passage levels. Second, in order to assess comprehension at multiple levels of text, it is necessary to measure comprehension with multiple measures. Silverman et al. (2014) assessed students' reading comprehension growth with multiple norm referenced measures that assessed both sentence level comprehension and passage comprehension under both timed and untimed conditions, as well as individually and group administered conditions. Future research should

follow this assessment design model in order to tap students' comprehension growth in more depth. For a summary of comprehension measures used, please see Appendix C.

Summary of findings. Researchers show changes in the amount and type of reading comprehension instruction teachers implement in the years since Durkin's (1978/1979) work. Observation studies indicate that teachers frequently incorporate practices that have been established as best practice in the extant intervention literature. Yet teachers vary in the delivery and content of instruction. Most teachers devote a majority of reading comprehension instruction to literal questioning (Durkin, 1978/1979; Ness, 2011; Pressley et al., 1998; Silverman et al., 2014). Comprehension strategy instruction focuses on inferencing, summarizing, visualizing, previewing and predicting, amongst other strategies (e.g., Ness, 2011; Silverman, et al., 2014). Though the content of delivery, comprehension strategy instruction is associated with positive student outcomes (e.g., Silverman, et al., 2014) more information is needed about the optimal method of delivery of comprehension strategy instruction in a natural setting. For instance, much skills-based practice, in natural settings, has been associated with negative growth in reading and reading comprehension (Bitter et al., 2009; Taylor et al., 2000), as has instruction that is heavily focused on literal comprehension questioning and fact-finding (Silverman et al., 2014). In contrast certain parts of the model of explicit instruction, such a modeling (e.g., Carlisle et al., 2011) are associated with positive reading comprehension outcomes. However, no studies have looked at content and delivery of instruction together. Thus, it is unknown what method of delivery of instruction might be best suited for reading comprehension strategy instruction. As such, more information is needed on the delivery of reading comprehension strategy instruction to understand the relationship between delivery of instruction and student outcomes.

Just as certain elements on instructional content (e.g., strategy instruction, discussion-based instruction, child-managed skills-based practice, etc.) have been positively and negatively

associated with students' reading comprehension outcomes, so too have elements of delivery of instruction. Related to the questions guiding this study, teacher scaffolding, modeling, and direction have been positively associated with students' reading comprehension outcomes (Bitter et al., 2009; Carlisle et al., 2011; Taylor et al., 2000). However, these results are limited as the units of analyses and definitions of delivery of instruction were not consistent across studies. In order to add to this line of inquiry, the present study aims to look at the content and method of delivery of instruction together with a well-defined unit of analysis, teacher utterance, to explore instruction in general-education classrooms, with a specific focus on how students are instructed (e. g, explicit instruction or skills-based practice) to use comprehension strategies.

ELLs are a group of students who consistently exhibit great difficulty with reading comprehension. However, this group of students is noticeably absent from observational studies. In fact, percentage of ELL participants was only reported in three of the nine studies reported in this review. Findings for ELLs indicated that ELLs benefitted from instruction that was teacher-directed, with modeling and scaffolding. As noted above, future research should continue to explore both content of delivery and method of delivery. Exploring both content of delivery (i.e., comprehension strategies) and method of delivery (i.e., explicit or skills-based practice) together, will allow me to explore which elements of instructional practices are most important for all students. Because research suggests that ELLs benefit from comprehension strategy instruction (e.g., Taboada & Rutherford, 2011; Silverman et al., 2014) and instruction that is to some degree explicit (e.g., Applebee et al., 2003; Duffy et al., 1986; McNeil, 2011; Reznitskaya, 2012; Walqui, 2006) an additional interest of this study is whether there is an interaction between instruction and language status on ELLs reading comprehension outcomes.

Research Questions

The research questions that emerged from the review of literature and the guide this study are:

1. a. Controlling for students' language status and prior achievement, what are the relationships between explicit and skills-based reading comprehension strategy instruction and reading comprehension outcomes?

   b. What are the relationships between parts of explicit reading comprehension instruction (i.e., introduction, modeling, collaborative practice, guided practice, and independent practice) and student outcomes?

2. a. Do relationships between explicit and skills-based reading comprehension strategy instruction and reading comprehension outcomes differ for EO and ELL students?

   b. Do the relationships between parts of reading comprehension instruction (i.e., introduction, modeling, collaborative practice, guided practice, and independent practice) and outcomes differ for EO and ELL students?

Chapter 3: Methods

Purpose and Research Questions

The purpose of this study is to investigate the delivery of reading comprehension strategy instruction in third through fifth grade classrooms and explore relationships between delivery of reading comprehension strategy instruction and students' reading comprehension outcomes. Previous research has established that *content* of instruction, specifically comprehension strategy instruction is associated with positive student outcomes (e.g., NICHD, 2000; Silverman et al., 2014). Similarly, certain types of *delivery* of reading comprehension instruction such as scaffolding and guided practice are positively associated with students' reading comprehension outcomes (e.g., Bitter et al., 2009; Carlisle et al., 2011; Connor et al., 2004). And, delivery such as a focus on skills instruction are negatively related to students' reading comprehension outcomes (e.g., Bitter et al., 2009; Knapp, 1995; Taylor et al., 2000). However, no study has examined the delivery, either explicit or skills-based, of comprehension strategy instruction. Thus, of particular interest in this study is whether the associations between the type of delivery of reading comprehension strategy (i.e., explicit or skills-based) instruction is associated with students' reading comprehension outcomes. Of additional interest is whether relationships between instruction and outcomes differ for students of different language backgrounds, specifically English language learners (ELLs) and English only (EO) students. In this study, ELL students are students whose parents indicated that Spanish was spoken in the home. EO students include students whose parents reported, on a researchers' home language survey, that no language other than English was spoken at home. (For more information on ELL/EO classification, see below). The specific research questions guiding the study are:

1. a. Controlling for students' language status and prior achievement, what are the relationships between explicit and skills-based reading comprehension strategy instruction and reading comprehension outcomes?

   b. What are the relationships between parts of explicit reading comprehension instruction (i.e., introduction, modeling, collaborative practice, guided practice, and independent practice) and student outcomes?

2. a. Do relationships between explicit and skills-based reading comprehension strategy instruction and reading comprehension outcomes differ for EO and ELL students?

   b. Do the relationships between parts of reading comprehension instruction (i.e., introduction, modeling, collaborative practice, guided practice, and independent practice) and outcomes differ for EO and ELL students?

In this chapter, first I provide a context for the study. Then, I describe the methods of the study including participant selection, development of a coding scheme, and data analysis.

Context of the Study

This study is situated within a larger observational study (Silverman et al., 2014) in which the purpose was "to explore the relationship between teachers' instruction and EO and bilingual students' vocabulary and comprehension in linguistically diverse upper elementary school classrooms" (p. 2). Classroom observations were conducted three times (fall, winter, spring) in 33 classrooms at two research sites (Northeastern and Mid-Atlantic). In addition, researchers assessed 274 students on a series of literacy measures to explore the relationship between teachers' instruction and student outcomes. In order to explore the relationship they coded for each teacher utterance, or unit of speech of a single "breath group" or intonation bounded by pauses on either side (Crookes, 1990, p. 194). They decided on this unit of analysis

as it provided a precise way to code for each type of instruction throughout a lesson. That is, teachers generally only implemented one type of instruction per unique utterance. In total, about 75% of all utterances across lessons belonged to teachers, and in general teacher utterances were more than four times as long as student utterances.

Several findings were reported in the Silverman et al. (2014) study. Most relevant to the present study are the comprehension findings that indicated that teachers' instruction related to inferential comprehension was positively associated with change in students' reading comprehension. Additionally, an interaction between language status and teachers' instruction of comprehension strategies was associated with positive change in reading comprehension for Spanish-English ELL students but not for EO students. (For more information, see Silverman et al. (2014).)

The Present Study

In this section I describe the design of the study that is a secondary data analysis of data from Silverman, Proctor, and Harring's (2009-2012) work. First, I explain the design of this study followed by information about student and teacher participants. Then, I explain the development of a coding scheme and coding process. Finally, I explain the procedures used to complete the quantitative data analysis.

Design. To explore the research questions guiding the study, I conducted a secondary data analysis of the existing data set analyzed in Silverman et al.'s (2014) study. Though I used an existing data set, I conducted all coding independently from previous analyses. To explore research question one that investigates statistical relationships between the delivery of types of reading comprehension strategy instruction (i.e., explicit and skills-based, for more information see section below) and students' reading comprehension outcomes, I transformed qualitative data

collected during classroom observations into quantitative data through a process called "quantitizing" (Tashakkori & Teddlie, 1998, p. 126). Then, through multiple regression analysis, I explored the relationships between types of reading comprehension strategy instruction and student reading comprehension outcomes. To explore research question two, I investigated if there was a difference in outcomes for ELL and EO students by adding a language status interaction variable to the multiple regression analysis model. Additionally, I examined if there was an interaction between language status and instructional variables. In the next section, I detail the methods I used to address my research questions.

Selection of participants. In the original study (Silverman et al., 2014), school, student, and teacher participants were selected through a multistep process. Department of Education officials in districts at the Mid-Atlantic and Northeastern sites provided initial consent to conduct this study in their district. Then, these officials suggested participant schools based on the demographics in which the researchers were interested (i.e., large populations of Spanish-speaking ELL students). The researchers contacted the suggested school principals, described the study, and sought permission to conduct research in their schools. In the end six schools resulted from this process (based on principal permission and appropriate demographics). Then, principals and researchers presented the goals and process of the study to all of the third through fifth grade teachers in the school and subsequently asked teachers to participate. All third through fifth grade teachers in each school agreed to do so. Next, the researchers sent a letter to parents of all students in each third through fifth grade teacher's classroom a letter (in Spanish and English) inviting their children to participate. Approximately 70% of the students' parents provided consent for participation, and of those students about 50% were selected to participate. The goal was to include eight student participants in each classroom. (See Appendix A for more

information.)

Though the Silverman et al. (2014) study included students and teachers from both a Northeastern as well as the Mid-Atlantic site, in the present study I included students and teachers from the Mid-Atlantic site only. I made this choice because whereas teachers in the Northeastern site classrooms used a variety of curricula the curriculum across the Mid-Atlantic sites was uniform, allowing for some control of differences attributable to curricula and for more focused exploration of delivery of teachers' instruction within the curriuculum.

Researchers commonly include two to three observations for analyzing regular classroom instruction (e.g., Bitter et al., 2009; Connor et al., 2004; Connor et al., 2011; Connor, et al., 2004; Durkin, 1978/1979; Wasik & Bond, 2001) and recent research demonstrates that teacher instruction is generally stable across time (Al Otaiba et al., 2008; Smolkowski & Gunn, 2012). In this study, I chose to include only students in classrooms/instructional groups with three observations of instruction to ensure thorough representation of instruction. Since the original study included students in classrooms/instructional groups with missing data (i.e., missing observation data due to technical problems or scheduling conflicts), the final sample in this study (n = 164) is somewhat smaller than the Mid-Atlantic sample sample in the original study (n = 204) See the following sections for more information.

Determination of students' language status. Students were identified as ELL based on information provided by parents on a home survey created by Silverman et al. (2014). Students whose parents reported that Spanish was spoken in the home were classified as ELL. Students whose parents reported that a language other than Spanish was spoken in the home were excluded from the study. Thus, for purposes of this study, students who spoke Spanish in the home were classified as ELL, and students whose parents did not report Spanish (or another

language) spoken in the home were classified as EO. This designation differed from the district-based designation that determined language status based on a combination of a home-language survey and language assessments. This method for identifying ELLs was chosen because the literature suggests that even after students, who speak a language other than English at home, exit form ESL services and district designations, many still struggle with academic language and reading comprehension.

Classroom observations. Research assistants visited the classrooms of participating teachers' classrooms three times (early winter, late winter/early spring, and late spring) to observe all reading/language arts instruction across a school day. During these observations, research assistants collected audio-recordings of instruction and recorded field notes to report on contextual information such as student grouping, instructional materials and any relevant nonverbal information (e.g., use of technology, pictures, etc.). After observations, the audio-recordings were transcribed by a transcription service. Then, the RAs who conducted classroom observations checked the transcripts for accuracy before coding. For analysis, these transcripts were the primary data source and the observation notes were consulted for clarification when necessary.

All of the language arts instruction received by students in the sample was observed 3 times (fall, winter, spring). At both schools the standard time for the total amount of Reading/Language Arts instruction (i.e., including workshop for students who had a separate workshop time) was 90 minutes. However, the average time of observed instruction was 60 minutes. Note that at one school, School A, Reading/Language Arts instruction was departmentalized thus one teacher taught three sections of Reading/Language Arts to different groups of students. In this school, students also received 30 minutes of Reading instruction (in a

Reading workshop) from the homeroom teacher and thus students were clustered in instructional groups in order to account for all reading instruction they received. As a result, in School A, teacher talk included Language Arts instruction provided by the departmentalized teacher plus the Reading Workshop instruction provided by the homeroom teacher. For example, in School A (see Table 2) Mrs. Rogers taught Language Arts to the entire third grade for a total of three class periods (Rogers 1, Rogers 2, Rogers 3). In addition, Ms. Smith and Mr. Wilson taught Reading/Language Arts to their homeroom classes. As a result, a student in Ms. Smith's homeroom who was in Mrs. Rogers' third period Language Arts class would be assigned to Rogers 3 + Smith for data analysis. See Table 2 for more information on assignment to instructional groups for analysis. In School B, teacher talk included all Language Arts instruction provided by the homeroom teacher. For example, a student in Mrs. Corrigan's third grade class would be only be assigned to that instructional block because all instruction was provided by Mrs. Corrigan. (For more information on instruction in this school, see Silverman et al., 2014.) In sum, the unit of analysis, teacher talk, was designed to capture all teacher talk students received across one day of observed instruction.

Transcripts from 59 Reading/Language Arts classroom observations were included for analysis. These 59 observation transcripts represented three lessons from each of a total of 11 general education teachers from two schools at the Mid-Atlantic site). In summary, there were a total of 11 general education teachers, four additional homeroom/workshop teachers (with a total of 19 instructional groups) and 164 students represented in the final data set. Note that grade four at School A was eliminated from analysis because the English/Language Arts teacher left for maternity leave during this study. This elimination of observations as well as attrition of

students led to a reduction in student participants from 204 to 164 at the end of the study. See a summary of student demographics in the tables below.

Table 1

Student Demographic Data

Demographic Category	n	percentage
Gender		
Female	86	52.4
Grade		
3	70	42.7
4	34	20.7
5	60	36.6
Ethnicity		
Black	79	48.2
Latino	78	47.6
White	7	4.3
Additional Services		
IEP	20	12.2
Federal School Lunch Program	140	85.4

Table 2

*Number of Consented ELLs and EOs by Instructional Group**

Grade	Instructional Group	Number of Consented ELLs	Number of Consented EOs

3	Corrigan	6	5
3	Gray	4	8
3	Harris	8	6
3	Rogers 1+Rogers	7	5
3	Rogers 2+Smith	5	2
3	Rogers 2 + Wilson	5	1
3	Rogers 3+Smith	1	4
3	Rogers 3+Wilson	1	2
4	Lawrence	8	6
4	Montanaro	6	5
4	Ziegler	2	7
5	Stopak	2	8
5	Mason	4	5
5	Griffith	1	9
5	Rosales 1+Rosales	6	5
5	Rosales 2+ Fisher	3	0
5	Rosales 2+Chuk	1	5
5	Rosales 3+Fisher	3	4
5	Rosales 3+Chuk	2	2
Total	19	75	89

*Students are identified by instructional groups because at one school multiple teachers provided Reading/Language Arts instruction across the day. Thus, students are placed into groups based on all the Reading/Language Arts instruction they received across the instructional day.

Teacher demographics. The final data set included 11 general education and four additional homeroom/workshop teachers from two schools at the Mid-Atlantic site. Teachers represented six third grade teachers, three fourth grade teachers, and six fifth grade teachers. Teachers reported an average of 5 years of teaching experience, and the majority (63.2%) had completed graduate work.

Coding process. Though the present study was designed as a secondary data analysis of an existing data set, all coding was conducted with fresh eyes and a new coding scheme. That is, though the results of the initial Silverman et al. (2014) study led to the questions guiding this study, all coding was conducted anew as described in the following sections. Note: Based on previous educational research (e.g., Aukrust, 2007; Bowers & Vasilyeva, 2011; Dickinson & Porche, 2011, McNeil, 2011; Reznitskaya, 2012; Walqui, 2006), teacher talk was analyzed to understand the nature of instruction. In this study, the unit of analysis of instruction is each unique teacher utterance (Crookes, 1990; Silverman et al., 2014)

Preliminary development of the coding scheme. The first phase of qualitative data analysis began during the preliminary development of the coding scheme in preparation of this study. I created an initial coding scheme based on previous literature to capture explicit comprehension strategy instruction. Because the goal of this study was to examine the delivery of reading comprehension strategy instruction, the initial coding scheme was designed to capture the explicitness of such instruction. This approach is called directed content analysis (Hsieh & Shannon, 2005), as existing research was used to design the coding scheme (Potter & Levine-Donnerstein, 1999). Comprehension strategy instruction was the main focus of coding because a) this is an area of instruction established in the extant literature as being related to students' comprehension growth (e.g., NICHD, 2000 and as described in previous chapters) and b)

comprehension strategy instruction was associated with comprehension growth for ELLs but not EOs in Silverman et al. (2014). However, Silverman et al. only examined the frequency of instruction (related to comprehension strategy instruction of previewing, activating background knowledge/ making connections, monitoring, visualizing, or summarizing), thus, questions remain related to the association between delivery of comprehension strategy instruction and positive student outcomes.

To start, I created a coding scheme, based on the one Ness (2011) used, to capture the explicitness of comprehension strategy instruction. In her work, Ness coded any comprehension instruction as explicit if it met one of the following criteria (based on Duke & Pearson's (2001) description of explicit instruction):

- An explicit description of the strategy and when and how it should be used
- Teacher and/or student modeling of the strategy in action
- Collaborative use of the strategy in action
- Guided practice using the strategy with gradual release of responsibility
- Independent use of the strategy

To develop and test this initial coding scheme, I sampled one third (n=12) of the classroom observation transcripts. As described above, first, I read each transcript to identify comprehension strategy "events" or a part of the lesson in in which the teacher focused on the instruction of a unique comprehension strategy. For instance, an "event" about the comprehension strategy *visualizing* could include some or all of the elements of the explicit instruction model above. During the initial pass at coding, however, I noted limitations with using this coding scheme. First, teachers often asked children to use a strategy but never provided any explanation of how to use the strategy. Second, I noticed great variation within

teachers' implementation of the explicit model. For example, some teachers spent much of their instruction in the independent practice step, and others spent the majority of their explicit instruction in the modeling step. Thus, given these limitations, and the literature referenced below, I deemed it necessary to include an additional category, skills-based comprehension strategy instruction, to fully capture the nuances of comprehension strategy instruction. Also, in addition to coding explicit instruction as a whole model, I coded each step of the model separately.

In their work, Afflerbach, Pearson, and Scott (2008) explained the difference between teaching for strategy development versus teaching for skill development. They described strategy instruction in the following manner: "When we are teaching strategically, we help students to analyze tasks, to consider various approaches to performing the task, and to choose among alternative actions to reach the goal (p. 372)." In contrast, they explained skill-based instruction as, "Teaching skills involves practice and feedback to improve speed and efficiency, which taken together amount to what we call fluency (p. 372)."

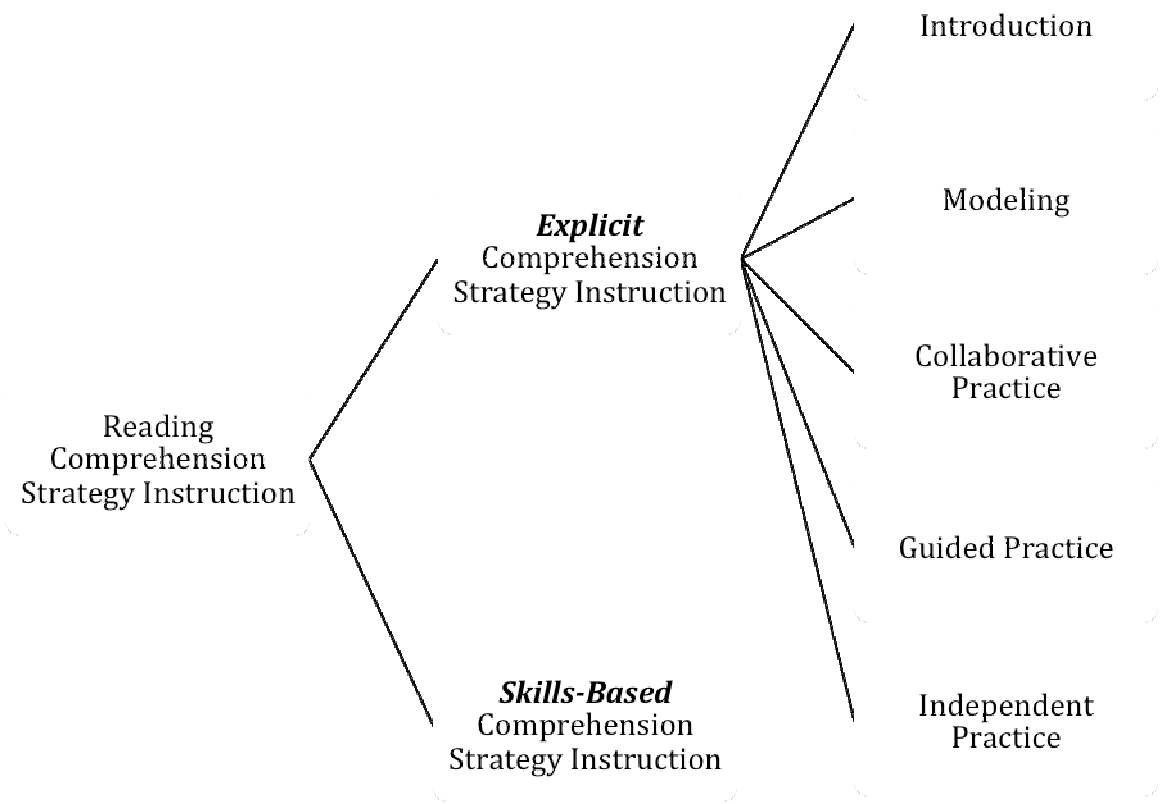
In light of the literature cited above, I adapted Ness' (2011) coding scheme. First, I read each transcript to identify any reading comprehension strategy instruction events. Then, I used the adapted coding scheme to identify whether comprehension strategy instruction was explicit, or skills-based. That is, for each sentence level utterance identified within a comprehension strategy event, I coded every utterance as explicit or skills-based. The utterance was chosen as the unit of analysis based on previous research (e.g., Silverman et al., 2014) and because in preliminary coding, I found that applying codes at a larger unit of analysis caused me to lose important information. First, because the length of teacher turns (e.g. uninterrupted speech before a student spoke) varied greatly, I did not find that I was fairly accounting for the amount

of teacher talk related to comprehension strategies. Additionally, I often found that the type of talk varied greatly within each teacher turn. For instance, within one teacher turn a teacher could provide behavioral information, assign homework, mention a comprehension strategy, and introduce a book to be read. Thus, I chose to use the utterance, or a single breath group (Crookes, 1990) in order to carefully analyze talk related to reading comprehension strategies.

Note that in order for any utterance to be coded as explicit, it had to be within the context of the entire explicit instruction model (i.e., a comprehension event that included introduction, modeling, collaborative practice, guided practice, and independent practice). On the other hand, I coded utterances as skills-based when they occurred in the absence of instruction about the strategy. Once I identified all explicit instruction codes, I returned and applied a secondary code to denote which step of the explicit model took place. In order to code each utterance, I took into account the entire comprehension event. See the chart below for the decision-making process I followed.

Figure 2

Coding Decision



Tree

Iterative coding process. The coding process took place in an iterative manner that included both open, axial, and selective coding (Strauss & Corbin, 1990). In open coding, a researcher reviews transcripts or narratives and notes any observations. Everything is coded in this phase of the process in order to account for all possible aspects of the data that may relate to a research question. In time, the concepts that emerge from the data are merged together and renamed. As concepts continue to merge together, the process of axial coding, or "a set of procedures whereby data are put back together in new ways after open coding, by making connections between categories" (p. 96), begins. In the final step, selective coding, I selected the

final core categories by reviewing the relationships between categories and refined them in order to finalize and apply codes (p. 116).

Though coding can be developed and applied by a sole researcher, it is strengthened by check coding (Miles & Huberman, 1994) as more team members can highlight the consistencies and inconsistencies of a coding scheme. Additional coders are helpful in the development of coding schemes/manuals as they allow for discourse around development of coding categories and clear coding rules (Schilling, 2006; Weber, 1990). Furthermore, coders' beliefs and/or understanding of coding can change subtly over time. Thus, coders can help one another to ensure that they do not drift from the original codes as they work with the data (Miles & Huberman; Weber). In this study I employed a research assistant for development and revision of the coding scheme. In addition, I employed a second research assistant to double code a portion of the data to check for reliability. Reliability and double coding processes are reported in the following sections.

In order to initiate the coding process, I did the following:

1. I reread all included transcripts to familiarize myself with context and instruction.
2. As I read I considered what would be difficult about applying the coding scheme as well as looked for examples and non-examples for coding (i.e., open coding).
3. As a result, I began to solidify a coding scheme with these examples/non-examples of explicit comprehension strategy instruction (i.e., axial coding).
4. Simultaneously, a research assistant, with robust teaching and research experience, reread a sample (n=6) of transcripts. During this time she also applied open and axial coding.

5. We met after she applied her open and axial coding in order to compare our emerging coding concepts and revise the coding scheme. From this initial pass at coding, I developed the scheme as described below.
6. After settling on this initial coding scheme, I randomly sampled three transcripts for check-coding (Miles & Huberman, 1994). In this process, the check coder and I double coded these transcripts. This initial view of transcripts by a researcher independent from the project helped to finalize the definitions of each code.
7. After each document was coded, we met to compare codes, discuss difficulties with using the coding scheme and to revise the coding scheme as necessary (using examples from the data set).

To code each utterance I used the final coding scheme as is described in the following section. First, I considered the level of strategy instruction as follows:

Strategy instruction. Two initial categories were considered before codes were applied. In order to determine the type of strategy event, an entire transcript was read to decide if strategy events were in the context of explicit instruction or were skills-based (as described below). In order to determine the following, it was necessary to consider and instructional instance (and the preceding context of the utterance) in order to appropriately designate which of the following categories in which the utterance falls:

- Explicit Strategy Instruction—An instance in which a teacher names, explains, models the use of, guides practice of, and engages students in the independent practice with a strategy of interest.

- Skills-based strategy practice—An instance in which a teacher requests students' independent use of a strategy *with no explicit strategy instruction* in the context (proceeding within the lesson transcript) of the request.

Explicit strategy instruction. Explicit instruction codes reflect *all* of the elements of the explicit instruction model. The elements included are: introduction to the strategy, teacher or student modeling of the strategy, collaborative use of the strategy, guided practice of strategy use, and independent use of the strategy. *Note that in order for any utterance to be considered explicit instruction, it had to be in the context of an event in which the teacher named the strategy being used.*

In the following excerpt the teacher explicitly names, describes, and introduces the use of the strategy. Each of the teacher's utterances were? coded as explicit instruction because later in the lesson the teacher included elements of modeling, collaborative practice, guided practice, and independent practice.

> We're going to be working with inferences again, just like we've been working with all week long. We're working with different stories. While you're reading, you have a different purpose. You're gonna be thinking about this making inferences. What information is not stated in the text but I can connect it to my background knowledge to come up with some kind of conclusion.
> For example, if I were to come in and I came in and I was shivering but I didn't say anything. I came in and I was shivering. Why did you say cold? Who said cold? Why did you say cold? Did I have to tell you that I was cold? No, you used your background knowledge and you used that action that I was doing to draw a conclusion, saying Mrs. X must be cold. That's what we're gonna be working with when we read this story. There's gonna be some information that's not gonna be in the text. So, we really have to be making those connections the entire time that you are reading. If you see something and it reminds you, make a note of it. Write it down on your paper. Maybe put a C next to it or write quickly what your connection is. Okay. So, if I write something about cats, I'm gonna put I have two cats and then I'll

> quickly keep reading on because that's my connection to that word cat.

The following excerpt includes explicit instruction because the teacher names a strategy. Then the teacher helps the students in guided practice of the strategy by scaffolding their instruction with questions and finally asks them to practice the strategy with their group mates.

> I want you to think for a minute and make a prediction with your group right now. So Ivan has gone into the kitchen to see what do they use, what kind of salt do they use? Do they use sea salt? Do they use tiny salt? Do they use lots of salt, little salt? What he found out then was that they don't use any salt. So he secretly shook the right amount of salt into each of the dishes that was about to go out to the king. I want you to talk with your team about what you think might happen when the king and his people.

Skills-based comprehension instruction. In skills-based comprehension strategy instruction, teachers ask students to apply a comprehension strategy as a skill. That is, teachers do not contextualize the application of a strategy with any instruction. The examples below are part of a comprehension event. Note that a comprehension event could include multiple teacher utterances. Events were identified first in order to determine if utterances were in the context of an explicit instruction or skills-based practice event. The excerpt is part of the beginning of skills-based lesson on summarizing. The teacher then simply moves around the classroom monitoring (mostly behavior) related to this activity.

> Okay, you are going to continue the activity that we started yesterday. I'm going to put you back into your groups. You're going to go to the same tables, and you're going to work on your summaries. I strongly suggest that you reread the article today, because it's been a whole day and you probably forgot. Then you need to create your circle map with main idea and details, and then you need to write your summary on that. Some of you only got to read yesterday and that was fine.

Coding for aspects of explicit instruction. In addition to coding for examples of the explicit model of instruction as a whole, I coded examples of each aspect of the model:

introduction, modeling, collaborative practice, guided practice, and independent practice. I applied the code for *introduction* when a teacher introduced the strategy by naming it and explaining when and how the strategy could be used. For instance in the previous example in Table 3 the following utterances were coded as introduction because the teacher names and explains the strategy. Those coded examples are repeated below.

> While you're reading, you have a different purpose. You're gonna be thinking about this making inferences. What information is not stated in the text but I can connect it to my background knowledge to come up with some kind of conclusion. For example, if I were to come in and I came in and I was shivering but I didn't say anything. . . No, you used your background knowledge and you used that action that I was doing to draw a conclusion, saying Mrs. XX must be cold.

Next in the explicit model is modeling. I applied the code for modeling when a teacher thought aloud as she applied a strategy. In the following example, the teacher thinks aloud as she models the strategy making an inference:

> I'm feeling confused. Okay, I'm a little puzzled about the information that we just read in the third paragraph. The article says around 800 AD. Now, I know that's the year when it took place, but it says, you guys, that something terrible happened, something terrible happened. . .
> . . .Maybe the article just doesn't explain it, but I'm going to write these words down from the text in my notes column and then I'm going to add over here with my thinking, the reactions, which means what I'm thinking, and also my questions.

I applied the code for the third part of the model, collaborative practice, when a teacher and students worked together to use a strategy. Teachers modeled using the strategy part way and then asked for students to help continue the strategy use, while continuing to provide scaffolds. Collaborative practice differs from guided practice because in collaborative practice the teacher has more responsibility and in guided practice the students take on more

responsibility. In the following example the teacher engages her students in collaborative practice around the making an inference strategy.

Teacher	Okay, so let's go on reading, and I'm in the beginning of the fourth paragraph where it says I forgot the key.
Teacher	So let's go back to our story on the golden paper.
Teacher	Raise your hand.
Teacher	What grade is she in?
Teacher	Raise your hand, please, Student?
Student	First.
Teacher	She's in first grade.
Teacher	I know she's in first grade.
Teacher	Why are we locked out?
Teacher	Oh, no, no, no.
Teacher	I'm sorry.
Teacher	Tania, Maria asked.
Teacher	She was just in first grade.
Teacher	Who was in first grade, Student?
Student	Tania.
Teacher	"Why are we locked out, Tania?" Maria asked.
Teacher	She was just in first grade.
Student	Maria was.
Teacher	Maria is in first grade, so boys and girls, off to the side of your paper, make a note.
Teacher	Make a note Maria first grade.
Student	Maria first grade.
Teacher	Let's talk about—so we have three sisters.
Teacher	I'm also gonna write Tania's name, and we have another sister.
Teacher	What's the third sister's name?
Student	Anna.

In guided practice, teachers and students also work together to use a strategy, however the students have more responsibility for the strategy use. The teacher provides feedback, encouragement, and scaffolding as the students attempt to use strategies. The example below, in which the teacher engages the students in guided practice around making an inference, exemplifies when I applied this code in the data set:

Teacher	. . . little sisters.

Teacher	Little sisters.
Teacher	Look, you guys, that's the important information.
Teacher	They're little sisters, so as a reader, what can you now infer about Tania?
Student	She's the older one.
Teacher	She's the oldest.
Teacher	Does it tell us what grade she's in?
Student	No.
Teacher	Not yet, but what can we write up here next to our clues?
Teacher	Oldest.
Teacher	So go ahead and write that down.
Teacher	Tania's the oldest, Maria is in first grade, and Anna is third grade.
Teacher	So we know Anna's in third grade
Teacher	Tania's gotta be at least in fourth or older, right?
Student	She's in college.
Teacher	She could be in college.
Teacher	We're gonna read on to see if we can find out.
Teacher	Now that you guys have a little bit more bit of background information figured out about these three girls, let's go back to the I didn't expect that page.
Teacher	Willy, go to your I didn't expect that page.
Teacher	Good, Maleek.
Teacher	What's the relationship between the girls?
Student	Tania's the oldest.

In the last step of the explicit instruction model, independent practice, teachers provide children an opportunity to practice on their own. Teachers, optimally, continue to help children with their strategy use through scaffolding on an individual basis. In the following example, exemplifying this code in the data set, the teacher tells students her expectation for independent work:

Teacher	Your job right now.
Teacher	I have a challenge for you.
Teacher	Using this flow map, cuz I know we can be really wordy when we write our summaries.
Teacher	Using this flow map, I want you to try to summarize the story in 25 words.

Student	Oh God.
Student	Can you—
Teacher	I still want the most important ideas from the story.
Teacher	You can't just give me 25 words that aren't really important.
Teacher	Use this flow map—you already have the flow map.
Teacher	This is to help you turn 'em into sentences, but challenge yourself because you can do it in only 25 words.

Coding for final analysis. To begin coding for final analysis, I randomly sampled 20% of the transcripts. Another double coder, independent from the project, who had research and teaching experience, and I double coded these transcripts. In order to code each transcript we followed the following process (note: the double coder followed these steps for only 20% of the transcripts):

1. Reread each transcript to identify any instances of a comprehension strategy event (any mentioning or instruction related to a comprehension strategy).
2. Determine if the comprehension strategy event was explicit or skills-based. Explicit instruction included introduction, modeling, collaborative practice, guided practice, and independent practice related to specific strategy across the lesson. Skills-based included mentioning of or telling students to use a strategy.
3. Apply the appropriate explicit instruction or skills-based code at the utterance level.
4. Compare codes from 20% of transcripts. Discuss and resolve any discrepancies.
5. Reread transcripts in which the explicit instruction code was applied. For each utterance coded as explicit, apply codes for parts of the explicit instruction model (introduction, modeling, collaborative practice, guided practice, and independent practice).

6. Compare codes from 20% of transcripts with parts of the explicit instruction model codes. Discuss and resolve any discrepancies.
7. Calculate inter-rater reliability with Cohen's Kappa (Cohen, 1960) using the following formula:

Cohen's Kappa: $K = \frac{\Sigma a - \Sigma ef}{N - \Sigma ef}$

Σa = sum of all agreements between coders (sum of the frequencies on the diagonal)

Σef = expected frequency of agreements by chance $\frac{(\text{column total} * \text{row total})}{\text{overall total}}$

Rater 1 (across) /Rater 2 (down)	Explicit	Skills-Based	Calculations
Explicit	*		Sum Row 1
Skills-Based		*	Sum Row 2
Calculations	Sum Column 1	Sum Column 2	$\Sigma ef = \frac{(\text{Sum of Columns} * \text{Sum of Rows})}{\text{total agreements + disagreements}}$

Cohen's Kappa is a preferred method for calculating inter-rater reliability related to coding qualitative or categorical data. This measurement yields a range in reliability from 0 – 1.00 with values closer to one suggesting better reliability. A Kappa > .70 is considered satisfactory reliability. Inter-rater reliability was above .80 for all areas of coding.

Once these transcripts were coded for reliability, another 20% of the transcripts (n=12) were selected for "live coding". Double coding of these six transcripts took place in three phases. To ensure that drift did not occur, these double coded transcripts were spaced out across the coding schedule. Before coding, two transcripts were double coded, then, seven transcripts were single coded, followed by two double-coded transcripts, etc. Inter-rater reliability was 90%.

Quantitative data analysis. In order to explore research questions 1a) Controlling for students' language status and prior achievement, what are the relationships between explicit and skills-based reading comprehension strategy instruction and reading comprehension outcomes?, 1b) What are the relationships between parts of explicit reading comprehension instruction (i.e., introduction, modeling, collaborative practice, guided practice, and independent practice) and student outcomes? 2a) Do relationships between reading comprehension instruction and outcomes differ for EO and ELL students?, and 2b) Do the relationships between parts of reading comprehension instruction (i.e., introduction, modeling, collaborative practice, guided practice, and independent practice) and outcomes differ for EO and ELL students?, I conducted quantitative analyses of the observation data. This quantitative analysis required that I transform qualitative data into quantitative data in order to explore the statistical relationship between instruction and student outcomes. In this section, I describe the steps that I took to transform the data, the student assessment measures that I explored, and the statistical analyses I conducted to answer research questions one and two.

Transforming the data. I used frequency counts for each individual lesson transcript to transform, or "quantitize" (Tashakkori & Teddlie, 1998, p. 126), the qualitative codes into quantitative numerical data. As in Silverman et al.'s (2014) work, because each lesson observation differed in time, with the average observation time at 60 minutes, I calculated a prorated frequency count of comprehension codes following Silverman et al.'s method. First, I calculated the total number of explicit instruction codes per classroom for each unique code, multiplied each unique code by 60 (the average number of minutes across lessons), and divided the result by the actual number of minutes of the observation. I repeated this process for each lesson transcript for each teacher. Then, I calculated the average frequency for each code across

each observation per classroom (e.g., (Average codes per teacher = Wave 1 codes + Wave 2 code + Wave 3 codes)/3). As a result, I had an average frequency of each explicit instructional code per 60 minutes per teacher.

Student measurement data. In order to explore the relationship between explicitness of instruction and student outcomes, I used two measures: the Woodcock-Munoz Language Survey (WMLS) Passage Comprehension subtest (Woodcock et al., 2005) and the Gates-MacGinitie Reading Test, Fourth Edition (GMRT; MacGinitie, MacGinitie, Maria, & Dreyer, 2002) reading comprehension subtest. I chose to use two different measures of reading comprehension as they measure comprehension in different ways (i.e. at the sentence level vs. at the passage level) and under different conditions (i.e. timed vs. untimed). I made this decision because often, reading comprehension studies include outcomes that measure only sentence level or only passage level and/or under timed or untimed conditions. However, in classroom settings, it is expected that students are able to comprehend at both the sentence and passage levels under timed and untimed conditions. Moreover, research suggests that different measures of reading comprehension provide information about different types of reading comprehension skills (e.g., Cutting & Scarborough, 2006; Keenan, Betjemann, & Olson, 2008; Leider, Proctor, Silverman, & Harring, 2013). Therefore, I included the two different measures of reading comprehension that examine different facets of reading comprehension (i.e., comprehension at the sentence and passage levels and comprehension under timed and untimed conditions using different types of tasks).

Silverman et al. (2014) administered the WMLS Passage Comprehension subtest (Woodcock et al., 2005) individually to assess students' sentence and passage level comprehension under untimed conditions. This assessment includes cloze passages that increase in difficulty. During administration, research assistants (RAs) recorded each student response as

correct or incorrect, based on the appropriateness of the response in the context of the text (as dictated by the publisher's testing guidelines). For children between the ages of 7 and 13 internal reliability is .80-.94 (Woodcock et al., 2005). Raw scores will be used in statistical analysis.

RAs administered the Gates-MacGinitie Reading Test, Fourth Edition (GMRT; MacGinitie, et al., 2002) reading comprehension subtest in a group-based setting during a 35-minute time period. They administered Form S in the fall and Form T in the spring. During this assessment, students silently read a series of grade-level appropriate passages. Then they answered multiple-choice questions (including explicit and implicit questions) about the passage. For third through fifth grades the Kuder-Richardson Formula 20 (K-R 20) reliability coefficients of the GMRT are .92-.93 (MacGinitie et al., 2002). For alternate forms the reliabilities are 86-.87 for the same grades (MacGinitie et al., 2002).

RAs administered these assessments in the fall and spring of an academic year. RA administration fidelity was at least .90 on all measures. In addition, measurement data was double scored and double entered with reliability of at least .90.

Statistical analysis. In order to explore the research questions, I conducted multiple regression analysis. I entered the frequency of each behavior into a regression equation predicting student growth controlling for prior achievement and language status. This study was exploratory in nature. Prior to analysis, I examined the data to ensure it met the assumptions of linearity, normality, and homoscedaticity for multiple linear regression. All assumptions were met. I visually inspected the data using scatterplots to determine the nature of the relationship (i.e., linearity) between types of instruction and outcome measures. I explored the correlations

between variables and I examined the distribution for normality by examining boxplots and coefficients of skewness and kurtosis.

I used multiple regression analysis to examine the relationship between explicitness of reading comprehension instruction and students' reading comprehension outcomes. For each research question, I ran each statistical analysis twice: once using GMRT as the outcome measure and once using WMLS as the outcome measure. To explore research question one, the first model included student pretest scores, language status, and grade as control variables, the predictor variables of explicit and skill-based comprehension instruction, and the dependent variable student outcome measures. Research question 1b included control variables of pretest scores, language status, and grade, and independent variables of introduction, modeling, collaborative practice, guided practice, and independent practice. To explore research question two regarding whether the relationship between instructional strategies and comprehension differs by language status (ELL or EO), I examined the interaction between the language status and types of instruction with the outcome. The interaction between language status and comprehension outcomes demonstrated if the relationship between teacher practice and student outcome differed based on language status.

In order to explore RQ2b I employed a backward elimination model of regression. I decided upon this model given that RQ2b had a large number of variables to be explored, which can be accounted for in such a model. In the backward elimination process, all predictor variables are included in the full regression model to begin and individual variables are deleted from the model if they do not contribute significantly to the model. This process is continued until not more variables can be deleted.

In order to contextualize the statistical findings, I provide brief descriptions of each of the coding categories to explain the findings. See the table below with the regression models, along with a description of related predictors and the appropriate null and alternative hypotheses.

Table 12

Research Questions, Regression Model and Predictors, and Hypotheses

Research Question	Model	Model Coefficients of Predictors	Hypothesis
RQ1a: Controlling for students' language status and prior achievement, what are the relationships between types of reading comprehension strategy instruction and reading comprehension outcomes?	$\hat{Y}=\beta_o+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\beta_5X_5$ **model will be run twice, once for each outcome measure*	X_1 = Pretest X_2 = Language Status X_3 = Grade X_4 = Explicit Instruction X_5 = Skill-Based Instruction	H_0:$\Delta P^2=0$ H_A: $\Delta P^2\neq0$
RQ1b: What are the relationships between	$\hat{Y}=\beta_o+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\beta_5X_5+\beta_6X_6+\beta_7X_7+\beta_8X_8$	X_1 = Pretest X_2 = Language	H_0:$\Delta P^2=0$ H_A: $\Delta P^2\neq0$

parts of explicit reading comprehension instruction and student outcomes?	**model will be run twice, once for each outcome measure*	Status X_3 = Grade X_4 = Introduction X_5 = Modeling X_6 =*Collaborative Practice* X_7 = *Guided Practice* X_8 = *Independent Practice*	
RQ2a: Do relationships between reading comprehension instruction and outcomes differ for EO and ELL students?	$\hat{Y}=\beta_o+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\beta_5X_5+\beta_6X_6+\beta_7X_7$ **model will be run twice, once for each outcome measure*	X_1= Pretest X_2=Language Status (LS) X_3 = Grade X_4 =Explicit Instruction (EI) X_5= Skill-Based Instruction (SI) X_6 =	H_0:$\Delta P^2=0$ H_A: $\Delta P^2\neq 0$

		Interaction-LS*EI X_7 = Interaction-LS*SI	
RQ2b: Do the relationships between aspects of reading comprehension instruction and outcomes differ for EO and ELL students?	$\hat{Y}=\beta_o+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\beta_5X_5+\beta_6X_6+\beta_7X_7+\beta_8X_8+\beta_9X_9+\beta_{10}X_{10}+\beta_{11}X_{11}+\beta_{12}X_{12}+\beta_{13}X_{13}$ **model will be run twice, once for each outcome measure*	X_1= Pretest X_2=Language Status (LS) X_3 = Grade X_4 =Introduction (I) X_5=Modeling (M) X_6 = Collaborative Practice (CP) X_7 = Guided Practice (GP) X_8= Independent Practice (IP) X_9 =Interaction	H_0:$\Delta P^2=0$ H_A: $\Delta P^2\neq 0$

	I*LS
	X_{10}=
	Interaction
	M*LS
	X_{11}=
	Interaction
	CP*LS
	X_{12}=
	Interaction
	GP*LS
	X_{13}=
	Interaction
	IP*LS

The standardized beta in each equation provides information about the strength and direction of the relationships explored in each research question. Standardized betas (β) are reported in this study in order to ease interpretability across observations and measures. Standardized betas are often used when variables are measured in different units of measurement (e.g., language status in categories and outcome measures in numeric scores). The β represents the regression coefficients fitted to a standardized data model. In order to fit coefficients to the standardized data model, the sample mean is subtracted from each observation and divided by the standard deviation of the sample. Standardized betas differ from unstandardized coefficients (B) because B represents the raw score information and thus it can only be compared to other

coefficients if the variables use the same measures. As such, in the present study, the standardized betas are used.

To answer RQ1, I examined β_4 and β_5 as I was interested in understanding how teachers' use of explicit or skill-based comprehension strategy instruction is related to students' growth on comprehension outcome measures, controlling for beginning of the year skills (pretest) and language status. In multiple linear regression, the size of a coefficient for each independent variable describes the size of the relationship on the dependent variable. The sign of the coefficient indicates the direction of the relationship. For example, a positive and significant beta would indicate that the type of instruction is positively associated with student growth on the given comprehension outcome measure, keeping all else in the model constant. If language status is 0 then the model is for EO students (if EO is coded as 0). If language status is 1 then the model is for ELL students (if ELL is coded as 1).

In regression with multiple independent variables, the coefficient for the independent variable represents the difference in the outcome variable associated with a one-unit difference in the independent variable, when holding all else in the model constant. In the present study, a one-unit increase in explicit instruction or skills-based practice would be related to a change equal to β_o in the student outcome measure, holding all else constant. For instance, if the beta for $\beta_4 = .25$, then that would mean that a one-unit increase in explicit instruction is associated with a .25 difference in comprehension when holding all else in the model constant.

Conversely, a negative and significant relationship would indicate that type of instruction is negatively related to student growth on the given comprehension measure keeping all else in the model constant. If language status is 0 then the model is for EO students (if EO is coded as 0) and is language status is 1 then the model is for ELL students (if ELL is coded as 1). In the

case of a negative beta, that statistic would imply that a negative relationship exists between type of instruction and student outcome. For instance, if the beta = -.25points, then for one-unit increase in explicit instruction, the student outcome measure would be associated with .25 points less on comprehension, when holding all else in the model constant. See below for an explanation of each coefficient for RQ1a.

- β_o: β_o is the intercept holding all else in the model constant.
- β_1: The standardized estimate for β_1 would indicate the difference in student outcome measure associated with every one-unit increase in pre-test when holding all else in the model constant.
- β_2: The standardized estimate for β_2 would indicate the difference in student outcome measure associated with language status when holding all else in the model constant.
- β_3: The standardized estimate for β_2 would indicate the difference in student outcome measure associated with grade when holding all else in the model constant.
- β_4: The standardized estimate for β_4 would indicate the difference in student outcome measure associated with every one-unit increase in explicit instruction when holding all else in the model constant.
- β_5: The standardized estimate for β_5 would indicate the difference in student outcome measure associated with one-unit increase in skills-based practice when holding all else in the model constant.

For RQ1b the coefficients are as follows:

- β_o: β_o is the intercept holding all else in the model constant.

- β_1: The standardized estimate for β_1 would indicate the difference in student outcome measure associated with every one-unit increase in pre-test when holding all else in the model constant.
- β_2: The standardized estimate for β_2 would indicate the difference in student outcome measure associated with language status when holding all else in the model constant.
- β_3: The standardized estimate for β_3 would indicate the difference in student outcome measure associated with grade when holding all else in the model constant.
- β_4: The standardized estimate for β_4 would indicate the difference in student outcome measure associated with introduction when holding all else in the model constant.
- β_5: The standardized estimate for β_5 would indicate the difference in student outcome measure associated with modeling when holding all else in the model constant.
- β_6: The standardized estimate for β_6 would indicate the difference in student outcome measure associated with collaborative practice when holding all else in the model constant.
- β_7: The standardized estimate for β_7 would indicate the difference in student outcome measure associated with guided practice when holding all else in the model constant.
- β_8: The standardized estimate for β_8 would indicate the difference in student outcome measure associated with independent practice when holding all else in the model constant.

To answer RQ2a and RQ2b, I used an interaction model. In an interaction model, a significant interaction indicates that the relationship of a predictor variable on the dependent variable is different at different values of the other predictor variables. An interaction term in a model changes the interpretation of all of the coefficients. In the present study, for example, if

there was no interaction term, β_3 would be interpreted as the unique relationship of explicit instruction on student outcome, holding all else in the model constant. But, in the present study, the interaction β_6 would mean that the relationship between explicit instruction and student outcome differs for students of different language status. The unique relationship of explicit instruction is represented by everything that is multiplied by explicit instruction in the model. β_3 is then interpreted as the unique relationship of explicit instruction on student outcome only when language status=0 (EO).

In this model with an interaction term, it is not possible to ascertain any unique effect of type of instruction without first identifying a language status group. This identification is necessary because the difference in relationship between of type of instruction and student outcomes is dependent upon the students' language status. As such, the relationship of β_4 *and/or* β_5, with student outcome cannot be explored without knowing which language status is being considered. The interaction (e.g., X_6) is the difference in the slopes of the instructional variable for the two language groups where EO is the reference group. If the two language groups had the same regression coefficient for the instructional variable, then the coefficient for the interaction would be 0. If the difference is significant, this indicates that the regression lines for the two language groups are significantly different. See below for a description of interaction terms.

RQ2a:

- β_6: β_6 is the difference in slopes for explicit instruction for EO and ELL with EO as the reference group.
- β_7: β_7 is the difference in slopes for skills-based practice EO and ELL with EO as the reference group.

RQ2b:

- β_7: β_7 is the difference in slopes for modeling for EO and ELL with EO as the reference group.
- β_8: β_8 is the difference in slopes for guided practice for EO and ELL with EO as the reference group.
- β_9: β_9 is the difference in slopes for independent practice for EO and ELL with EO as the reference group.

In sum, the interaction model in the present study aims to demonstrate the relationship between types of instruction and change in students' reading comprehension from fall to spring to see if it differs depending on language status. In other words, the goal is to see if the slopes of the regression lines between student outcome and types of instruction are different for different language status. In RQ2a β_6, and β_7, indicate how different the slopes are and in RQ2b β_7, β_8, and β_9, do. In RQ2b the interaction terms for introduction and collaborative practice were excluded from the model because of multicolinearity. See following sections for more information. *Note*: It is important to recognize that the statistical investigations used to answer RQ1 and RQ2, will explore correlational relationships, not causal relationships.

Hypotheses. Related to research question one, based on previous literature, I posited that, as indicated by the beta estimate, explicit instruction would be positively related to students' reading comprehension outcomes (Bitter et al., 2009; Carlisle et al., 2011; Taylor et al., 2009). On the other hand, based on previous research, I posited that skills-based practice would be negatively related to students' reading comprehension outcomes (Bitter et al., 2009; Taylor et al., 2009). Similarly given Silverman et al.'s (2014) finding that comprehension strategy instruction contributed to ELL students' outcomes, I expected that types of comprehension instruction

would also contribute uniquely to students' scores on each reading outcome in the study and would differ for students from different language backgrounds such that skills-based practice would be negatively associated with student outcomes and explicit instruction would be positively associated with student outcomes. The strength of the relationship between explicit instruction and comprehension would be stronger for ELLs since it is possible that they may need more explicit instruction given that they have more difficulty navigating content and language due to their language status. Since previous research demonstrated an association between scaffolding and students outcomes (e.g., Carlisle et al., 2011; Parker & Hurry, 2007), I believed that collaborative, guided, and independent practice would contribute uniquely to students' outcomes.

Specifically related to the interaction between language status and reading comprehension outcome, I believed that explicit instruction would be positively associated with ELL students' outcomes (see Carlisle et al., 2011; Connor et al., 2004; Silverman et al., 2014) and skills-based practice would be negatively associated with ELLs' comprehension outcomes (e.g., Bitter et al., 2009). Because ELLs experience success with opportunities for meaningful practice with peers (e.g., Gersten et al., 2007) I believe there will be an interaction with collaborative and guided practice and language status that will be stronger for ELLs than EOs.

Chapter 4: Results

In this chapter I describe the quantitative results from this study that explore a) the relationship between teachers' comprehension strategy instruction and students' outcomes, and b) the interaction of language status in the relationship between teachers' comprehension strategy instruction and students' outcomes.

This chapter is organized around the research questions (restated below) that guide this study. First, I describe the data on the types of observed utterances. Then, I present the results from multiple regression analyses to answer Research Questions 1a: *Controlling for students' prior achievement and language status, what are the relationships between explicit and skills-based reading comprehension strategy instruction and reading comprehension outcomes?* and 1b: *What are the relationships between parts of explicit reading comprehension instruction (i.e., introduction, modeling, collaborative practice, guided practice, and independent practice) and student outcomes?* Finally, I present results from multiple regression analyses to answer Research Questions 2a: *Do relationships between explicit and skills-based reading comprehension instruction differ for EO and ELL students?* and 2b *Do the relationships between parts of reading comprehension (i.e., introduction, modeling, collaborative practice, guided practice, and independent practice) and outcomes differ for EO and ELL students?*

Descriptive Results

In order to explore research questions one and two, I conducted quantitative analyses of the observation data. These quantitative analyses required that I transform qualitative data into quantitative data to explore the statistical relationship between instruction and student outcomes.

In order to transform the qualitative data into quantitative data, I "quantitize(d)" (Tashakkori & Teddlie, 1998, p. 126) the data using frequency counts. See below for a table that summarizes the average prorated frequency means and ranges for explicit, and skills-based practice, as well as for the five aspects of explicit instruction.

Table 13

Range and Means of Codes Explicit and Skills-based practice

Type of Instruction	Range	Minimum	Maximum	Mean
Explicit Instruction	2.19	.00	2.19	. 62
Skills-based practice	1.27	.00	1.27	.46

Table 14

Range and Means of Codes Parts of Explicit Instruction

Type of Instruction	Range	Minimum	Maximum	Mean
Explicit-Introducing	.29	.00	.29	.03
Explicit-Modeling	.24	.00	.24	.03
Explicit-Collaborative Practice	1.10	.00	1.10	.13
Explicit-Guided Practice	.96	.00	.96	.08
Explicit-Independent Practice	.50	.00	.50	.08

The range for each code had a minimum of zero as a result of a number of issues. First, many teachers had no reading comprehension strategy instruction. For instance, teachers may

have focused entirely on vocabulary or writing instruction within a lesson and no comprehension instruction. Or, reading comprehension may have been addressed in the form of an I-R-E approach (Mehan & Cazden, 2013) or a discussion approach, but without conversation about comprehension strategies. And, in many instances teacher demonstrated no comprehension instruction at all in any of the three observations. Of the other transcripts that did have reading comprehension strategy instruction many included no reading comprehension of one type or the other. That is, a teacher provided only skills-based or only explicit comprehension strategy instruction. Furthermore, only two teachers, representing only two instructional groups, included the full model of explicit reading comprehension strategy instruction. None of the other teachers in the data set included any explicit comprehension strategy instruction during any of the three observations. Thus, there are many instances of zeros in the data set.

Student measurement data. In order to explore the relationship between comprehension strategy instruction and student outcomes, I used the passage comprehension subtest of the Woodcock-Munoz Language Survey (WMLS) and the reading comprehension subtest of the Gates-MacGinitie Reading Test (GMRT). See below (Tables 15, 16, 17) for the range, mean and standard deviation for the assessments at each time point overall and by independent variables grade and language status, as well as descriptive variables ethnicity, individualized education plan and FARMS eligibility, and gender. Percentile ranks for pre and posttests on both measures are also listed. Percentile ranks are used because both assessments do not provide a standard score, thus percentile ranks ease interpretability across measures. Overall, monolinguals and ELLs differed in their performance from pretest to posttest on both outcome measures. Specifically, on the GMRT, at pretest, ELLs on average scored in the 20.81 percentile and the 26.13 percentile at posttest. In comparison, monolinguals scored on average in the 17.88

percentile at pretest and the 30.33 percentile at posttest. Related to the WMLS, ELLs increased from the 25.90 percentile at pretest to the 28.23 percentile at posttest. In contrast, monolinguals decreased from the 32.35 percentile at pretest to the 26.36 percentile at posttest. See the tables below for more information.

Table 15

Overall Measurement Data.

Measurement	Mean	Std. Deviation
GATES- Raw Score-Pretest	18.27	17.73
GATES- Raw Score-Posttest	10.77	39.59
WMLSR -Raw Score-Pretest	13.69	22.29
WMLSR- Raw Score-Posttest	13.45	24.03

Table 16

Outcome Measure Pre and Posttest Means by Control Variable: Grade

Grade		GMRT-Raw Score-Pretest	Pretest Mean Percentile Rank	GMRT-Raw Score-Posttest	Posttest Mean Percentile Rank	WMLSR- Raw Score-Pretest	Pretest Mean Percentile Rank	WMLSR- Raw Score-Posttest	Posttest Mean Percentile Rank
3rd Grade									
	Mean	17.01	22.39	13.23	25.17	16.74	36.19	11.21	30.42
	N	70	70	70	70	70	70	70	70
	Std. Dev.	21.33	47.12	38.79	28.96	3.37	20.84	27.52	38.55

4th Grade								
	Mean	22.26	17.53	10.24	36.85	11.94	30.77	14.94	27.49
	N	34	34	34	34	34	34	34	34
	Std. Dev.	7.94	48.48	41.45	22.32	28.41	39.15	20.46	28.86
5th Grade									
	Mean	17.47	16.48	8.22	27.40	11.12	20.70	15.20	23.32
	N	60	60	60	60	60	60	60	60
	Std. Dev.	17.73	46.39	39.59	26.74	22.29	35.79	24.03	28.27

Table 17

Outcome Measure Pre and Posttest Means by Control Variable: Language Status

Language Status	GMRT Raw Score-Pretest	Pretest Mean Percentile Rank	GMRT Raw Score-Posttest	Posttest Mean Percentile Rank	WMLSR- Raw Score-Pretest	Pretest Mean Percentile Rank	WMLSR- Raw Score-Posttest	Posttest Mean Percentile Rank
Monolingual								
Mean	17.84	17.88	7.55	30.33	13.61	32.35	11.17	26.36

	N	89	89	89	89	89	89	89	89
	Std. Deviation	23.23	53.60	45.15	32.29	24.68	34.37	29.90	39.21
ELL									
	Mean	18.77	20.81	14.60	26.13	13.79	25.90	16.15	28.23
	N	75	75	75	75	75	75	75	75
	Std. Deviation	7.09	37.82	31.64	19.19	19.24	28.08	13.99	24.20

Statistical Results by Research Question

In order to explore the research questions, I conducted multiple regression analysis. For Research Questions 2a and 2b, I included an interaction term in the multiple regression equation. In each equation, I entered the prorated frequency of each observed instructional utterance into a regression equation predicting student change in student outcomes from pretest to posttest (or time one to time three) controlling for prior achievement and language status. Prior to analysis, I examined the data to ensure it met the assumptions of linearity, normality, and homoscedasticity for multiple linear regression. I visually inspected the data using scatterplots to determine the nature of the relationship (i.e., linearity) between types of instruction and outcome measures. I explored the correlations between variables and examined the distribution for normality by examining boxplots and coefficients of skewness and kurtosis. All assumptions for each equation were met and inspections were satisfactory. Additionally, because there were multiple instances of multicolinearity in the data set and because I included interaction terms in the regression models, I centered all variables prior to analysis.

Research questions 1a and 1b. To answer the research questions 1a: *Controlling for prior achievement and language status, what are the relationships between explicit and skills-based reading comprehension strategy instruction and reading comprehension outcomes?* and 1b: *What are the relationships between parts of the explicit instruction model (i.e., introduction, modeling, collaborative practice, guided practice, and independent practice) and students' reading comprehension outcomes?*, I used multiple regression analysis to examine the relationship between explicitness of reading comprehension instruction and students' reading comprehension outcomes. For each research question, I ran each statistical analysis twice: once using the GATES-Reading Comprehension Subtest-Raw Score Posttest (GMRT) as the outcome

measure and once using the WMLSR-Passage Comprehension Subtest-Raw Score Posttest (WMLS) as the outcome measure. Pretest data are reported throughout this section as the pretest data from each assessment were used to control for prior achievement. To explore RQ1a, the models included student pretest scores, language status, and grade as control variables, the predictor variables of explicit and skill-based comprehension instruction, and the dependent variable student outcome measure. To explore RQ2, the models included student pretest scores, language status, and grade as control variables, the predictor variables of introduction, modeling, collaborative practice, guided practice, and independent practice, and the dependent variable of student outcome measure. In the sections below, I present findings for the research questions divided into subsections for each question.

Research question 1a. For RQ1a I used the following model: $\hat{Y}_{post}=\beta_o+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\beta_5 X_5$ The β terms represented in the model signify the change on the dependent variable associated with each of the independent variables as follows: X_1 = Pretest, X_2= Language Status, X_3= Grade, X_4= Explicit Instruction, X_5 =Skill-Based Instruction. The beta in each equation provided information about the strength and direction of the relationships explored in each research question. I conducted each of these steps twice: once in relation to the GMRT and once for the WMLS. See below for a table summarizing the findings for each model. Note standardized scores are reported to increase interpretability.

In the regression tables in this section, the regression coefficient for the predictor (B), the standard errors of the regression coefficients (SE B) and the standardized coefficients (β) are reported. The B explains the difference in outcome measure associated with a unit difference in the predictor variable. The SE B is used for hypothesis testing and creating confidence intervals. The β represents the regression coefficients if they were fitted to a standardized data model.

Standardized betas signify how many standard deviations a dependent variable will change, per standard deviation increase in the predictor variable. βs are often used when variables are measured in different units of measurement (e.g., language status in categories and outcome measures in numeric scores). To do so, the sample mean is subtracted from each observation and divided by the standard deviation of the sample. In this paper, the βs are discussed to ease interpretability across observations and measures.

Table 17

Research Question 1a Findings by Outcome Measure

	Model 1 (GMRT)[a]			Model 2 (WMLS)[b]		
Variable	B	SE B	β	B	SE B	β
Intercept	2.92	16.11		-11.03	9.95	
Pretest	.54	.17	.24*	.14	.09	.13
Language Status	6.17	6.17	.08	5.34	3.79	.11
Grade	-1.46	3.83	-.03	2.17	2.37	.08
Explicit Instruction	5.19	5.96	.08	.04	3.67	.00
Skills-based practice	7.08	7.41	.08	5.77	4.57	.11

Notes. *p<.05

[a]Adjusted R^2= .044 (p>.05)

[b]Adjusted R^2= .019 (p>.05)

Findings for the GMRT. No statistically significant findings emerged for either explicit instruction or skills-based practice in relation to students' performance on the GMRT.

Findings for the WMLS. No statistically significant findings emerged for either explicit instruction or skills-based practice in relation to students' performance on the WMLS.

Research question 1b. For RQ1b I used the following model: $\hat{Y}_{post}=\beta_o+\beta_1 X_1+\beta_2 X_{2+}\beta_3 X_3+\beta_4 X_4+\beta_5 X_5+\beta_6 X_6+\beta_7 X_7+\beta_8 X_8$. The β terms represented in the model signify the change on the dependent variable associated with each of the independent variables as follows: X_1= Pretest, X_2= Language Status, X_3=Grade, X_4= Introduction, X_5= Modeling, X_6= Collaborative Practice. β_7= Guided Practice, and β_8= Independent Practice. The standardized beta in each equation provided information about the strength and direction of the relationships explored in each research question. See below (Table 18) summarizing the findings for RQ1b. Note that in the following models, certain variables were excluded from analysis. The tolerance of a regressor variable represents the proportion of the regressor variable's sum of squares around the mean not accounted for by other variables in the regression equation. Variables are excluded from the model when tolerance is less than .10 indicating that the excluded variables contain redundant information causing multicolinearity, or high degrees of correlation, between predictor variables.

Table 18

Research Question 1b Findings by Outcome Measure

	Model 1 (GMRT)[a]			Model 2 (WMLS)[b]		
Variable	B	SE B	β	B	SE B	β
Intercept	5.89	16.26		6.60	9.76	
Pretest	.50	.17	.22	.15	.082	.14
Language	6.82	6.19	.086	6.26	3.70	.13

Status						
Grade	-2.28	3.88	-.051	.95	2.33	.04
Introduction		excluded[c]			excluded[c]	
Modeling	38.83	166.13	.069	-5.09	99.24	-.02
Collaborative Practice	26.40	26.00	.20		excluded	
Guided Practice		excluded		33.28	14.64	.35*
Independent Practice	-51.14	49.12	-.24	-52.84	30.27	-.41

Notes. *p< .05

[a]Adjusted R^2= .045 (p< .05)

[b]Adjusted R^2= .074 (p< .05)

[c]Variables are excluded from the model when the tolerance variable is less than .10 indicating that the excluded variables contain redundant information causing multicolinearity between variables.

Findings for the WMLS. One statistically significant finding emerged from the data in relation to RQ 1b. β_6 indicated that every one-unit increase in guided practice was associated with a 0.35 (p= 0.02) standardized deviation difference on the WMLS when holding all else in the model constant. No statistically significant findings for introduction, modeling, collaborative practice, or independent practice appeared.

Findings for the GMRT. No statistically significant findings related to introduction, modeling, collaborative practice, guided practice, or independent practice on the GMRT emerged.

Summary of findings research question 1. No findings resulting from research question 1a were statistically significant, not upholding the hypothesis that explicit instruction would be positively associated with students' performance on outcome measures, and that skills-based practice would be negatively associated with students' performance on outcome measures. There was one statistically significant finding for Research Question 1b, a significant and positive relationship between guided practice and performance on the WMLS, providing support for the hypothesis that guided practice would be positively associated with students' reading comprehension outcomes. There was no support for any of the other hypotheses associated with RQ1b.

Research questions 2a and 2b. I used multiple regression analysis to examine the relationship between explicitness of reading comprehension instruction and students' reading comprehension outcomes. These analyses also included interaction terms to examine whether the relationship between explicitness of reading comprehension instruction and students' reading comprehension outcomes depends on language status. For each research question, I ran each statistical analysis twice: once using GMRT as the outcome measure and once using WMLS as the outcome measure. In this section I present findings for RQ2a and RQ2b divided into subsections for each question and each subtest used for measurement.

Research question 2a. For RQ1a I used the following model: $\hat{Y}_{post}=\beta_o+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\beta_5 X_5+\beta_6 X_6+\beta_7 X_7$. The β terms represented in the model signify the change on the dependent variable associated with each of the independent variables (X) as follows: X_1 = Pretest, X_2= Language Status, X_3= Grade, X_4= Explicit Instruction, X_5 Skill-Based Instruction, X_6 = the interaction term for Language Status by Explicit Instruction, and X_7=the interaction term for Language Status by Skills-based practice. The beta for each interaction term is the difference

in slope of the instructional variable on the reading comprehension outcome for ELLs and EOs.n the equation provided information about if there was a relationship and how strong of a relationship existed. I conducted each of these steps twice: once in relation to the GMRT and once for the WMLS. Examination of the individual predictor variables revealed that none were statistically significant. See Table 19 for summarizing findings for RQ2a.

Table 19

Findings by Outcome Measure for RQ2a

	Model 1 (GMRT)[a]			Model 2 (WMLS)[b]		
Variable	B	SE B	β	B	SE B	β
Intercept	-.495	17.51		-14.34	10.84	
Pretest	.54	.17	.24*	.14	.085	.13
Language Status (LS)	9.88	12.03	.13	10.34	7.42	.22
Grade	-1.28	3.88	-.03	2.43	2.40	.09
Explicit Instruction (EI)	7.85	7.52	.12	2.05	4.61	.05
Skills-based practice (SB)	8.45	10.17	.10	8.63	6.24	.17
EI * LS	-6.71	11.34	-.07	-4.78	6.97	-.08
SB * LS	-3.59	15.27	-.04	-6.66	9.43	-.12

Notes. *p<.05

[a]Adjusted R^2= .033 (p>.05)

[b]Adjusted R^2= .010 (p>.05)

Research question 2a findings for the WMLS. No statistically significant findings related to the interaction between language status and explicit instruction or skills-based practice on the WMLS presented in the data set.

Research question 2a findings for the GMRT. No statistically significant findings related to the interaction between language status and explicit instruction or skills-based practice on the GMRT emerged.

Research question 2b. Because in the model, with interaction terms, in RQ1b there was multicolinearity, I reduced the model to explore RQ2b. In this reduced model I eliminated introduction and collaborative practice and the associated interaction terms since those were the variables associated with multicolinearity in the model used in RQ1b. To verify the model, I ran each instructional variable and associated interaction term separately with no different results than those presented in the models below. This reduction resulted in the following model: For RQ2b I used the following model: $\hat{Y}_{post}=\beta_o+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\beta_5 X_5+\beta_6 X_6+\beta_7 X_7+\beta_8 X_8+\beta_9 X_9$. . The β terms represented in the model signify the change on the dependent variable associated with each of the independent variables (X) as follows: X_1 = Pretest, X_2= Language Status, X_3=Grade, X_4= Modeling, X_5= Guided Practice, X_6= Independent Practice, X_7=the interaction of Language Status by Modeling, X_8=the interaction of Language Status and Guided Practice, X_9=the interaction of Language Status and Independent Practice.

Each beta for interaction terms indicated the difference in the instructional variable on the comprehension outcome for ELLs and EOs. I conducted the analysis twice: once in relation to the GMRT and once for the WMLS. No interactions were statistically significant. Findings for RQ2b are summarized in the tables below.

Table 20

Findings for RQ 2b by Outcome Measure

	Model A (GMRT)[a]			Model A (WMLS)[b]		
Variable	B	SE B	β	B	SE B	β
Intercept	5.59	16.50		-5.74	9.85	
Pretest	.48	.18	.22*	.15	.08	.14
Grade	-2.25	3.91	-.05	.85	2.34	.03
Language Status (LS)	7.20	6.75	.09	5.24	4.02	.11
Modeling	61.16	170.67	.11	6.42	101.44	.02
Guided Practice	33.96	29.44	.21	46.10	17.35	.48*
Independent Practice	-57.81	60.45	-.27	-78.23	35.43	-.60*
LS*Modeling		excluded[c]			excluded[c]	
LS*Guided Practice	-26.67	39.30	-.10	-28.28	23.18	-.18

LS*Independent Practice	20.80	51.25	.07	40.29	30.08	.22

Notes. *p< .05

[a]Adjusted R^2 = .04

[b]Adjusted R^2=.073

[c]Variables are excluded from the model when the tolerance variable is less than .10 indicating that the excluded variables contain redundant information causing multicolinearity between variables.

RQ2b findings for GMRT. There were no statistically significant findings related to associations between variables representing parts of the explicit instruction model and language status on any instructional variable.

RQ2b findings for WMLS. There were no statistically significant findings related to language status and any part of the explicit instruction model (i.e., introduction, modeling, collaborative practice, guided practice, independent practice) and the WMLS in the data set. Note that though two variables, guided practice and independent practice, were significant in this model, the variables of interest were the interaction terms. Given that the interactions were not significant, the interactions would be dropped from this model. As a result the effect of the instructional variables themselves should only be interpreted in models in RQ1.

Summary of findings for RQ2. Related to RQ2a no statistically significant interaction terms were significant revealing that no differences in associations between language status and explicit instruction or skills-based practice existed in the data. Thus, there was no support for any of the hypotheses related to RQ2a. Findings from RQ2b indicated that no interaction terms were significant, demonstrating that no associations between instruction and student outcomes differed for monolingual and ELL students. The lack of statistically significant findings in relation to interactions between language status and instructional variables was in opposition to the hypotheses that modeling, guided practice and collaborative practice would be associated with student outcomes differently for ELL students.

Summary of Findings

Data indicated that more guided practice was associated with higher scores on the dependent variable the WMLS. There were no other statistically significant findings as a result of this study. As a result of these findings, only one hypothesis, related to the positive

association between guided practice and student outcomes was upheld. The data did not support any other hypothesis.

Chapter 5: Discussion

Because upper-elementary students, especially ELLs, demonstrate difficulty with reading comprehension, this study sought to explore teachers' instruction related to reading comprehension strategies and how that instruction was related to student outcomes. In addition, since students, including ELLs, spend the majority of their instructional time in general-education classrooms (Calderón, Slavin, & Sanchez, 2011), and because much previous research validating reading comprehension strategy instruction took place in controlled settings (e.g. Gersten et al., 2007; Kamil et al., 2008; NICHD, 2000; Shanahan et al., 2010), more research was needed in natural settings. This study, which took place in everyday, natural tier-one general-education classroom settings, contributes to this literature. This setting is especially important to explore given that this is the first level, or Tier One, of reading instruction. Though ELLs sometimes receive additional ESL services outside of the classroom setting, these services are aimed at language development, not reading instruction. Thus it is important to understand how general-education teachers' Tier One reading instruction is or is not related to students', especially ELLs', outcomes.

The goal of this study was to understand the relationship between reading comprehension strategy instruction in general-education classroom settings and student outcomes. Additionally, because upper-elementary ELL students consistently exhibit difficulty with reading comprehension (e.g., Lesaux et al., 2006; NCES, 2009; 2011; Proctor et al., 2005), interactions between reading comprehension instruction, language status, and student outcomes were explored.

This study was situated in the context of multiple beliefs. First, successful reading requires children to master a number of skills as well as learn and apply strategies in order to understand text. Second, teacher variation in instruction contributes uniquely to students' change in outcomes (e.g., Datnow & Castellano, 2000; Englert & Tarrant, 1995; Jenkins & Leicester, 1992; Klingner, Vaughn, Hughes & Arguelles, 1999, Silverman et al., 2014). Furthermore, instruction is especially effective when teachers provide supports for student learning throughout instruction (Vygotsky, 1978; Baumann, et al., 2003; Duke & Pearson, 2002; Taylor, Pearson, Peterson, & Rodriguez, 2003). Related to these supports is social constructivist theory that suggests that more experienced others (i.e. teachers) influence children's learning by assisting in their acquisition of information (Vygotsky, 1978) and similarly social learning theorists laud the practice of "scaffolding", or providing supports to help students move from what is known to what is unknown during instruction. In contrast to solely drilling on basic reading skills, teachers who spend time to provide strategic instruction of reading related tasks are most effective (Duke & Pearson, 2002). Evidence suggests that although children may enter a classroom with varied reading ability, teachers' effective reading comprehension instruction can positively influence students' development in this crucial area of reading (e.g., Connor, Morrison, & Petrella, 2004; Taylor et al., 2003). Given these beliefs, the theoretical framework guiding this study was rooted in a) social learning theory and social constructivist theory, b) explicit instruction, and c) the gradual release of responsibility model of instruction.

In this chapter, first I provide a summary of findings. Next, I discuss the findings related to explicit instruction and skills-based practice, aspects of explicit reading comprehension strategy instruction, and differences between EO and ELL students. In each of these sections I

provide examples to support and explain the findings. I conclude with a discussion of the limitations of the study and suggestions for future research.

Summary of Findings

Only one statistically significant finding emerged from the conducted analyses: guided practice was positively associated with students' performance on the WMLS passage comprehension subtest. This finding indicated that more exposure to guided practice, in the context of an explicit model of comprehension strategy instruction, was associated with higher scores on the WMLS. There were no other statistically significant findings in this study.

Explicit Instruction

Explicit comprehension strategy instruction model included an introduction, modeling, collaborative practice, guided practice, and independent practice. On the other hand, the skills-based practice model included teachers asking students to complete a task using a comprehension strategy but no instruction on how to use the strategy. In sum, I observed explicit instruction in only five of the total lessons included for analysis in this study. Ten teachers provided skills-based and only two teachers delivered no comprehension strategy instruction. Only two teachers provided explicit instruction over the course of the three observations. One of those teachers provided explicit instruction in all three observed lessons, the other teacher in only two lessons. Twenty-seven lessons included skills-based practice and in 15 lessons no comprehension instruction occurred.

Previous studies examined aspects of explicit instruction, such as modeling or guided practice (e.g., Bitter et al., 2009; Taylor et al., 2000), or equated the explicit instruction model with one or a few parts of the model (e.g. Ness, 2011), but no study was located that examined the explicit model as a whole. However, in this study, I did examine the model as a whole. In

order for an explicit instruction code to be applied, every aspect (i.e., introduction, modeling, collaborative practice, guided practice, and independent practice) of the model had to be present. In addition, I examined the parts--introduction, modeling, collaborative practice, guided practice, and independent practice—within the context of the explicit model as a whole to see if certain parts of the model were associated with student outcomes. Interestingly, only two teachers in this study implemented the explicit model as a whole. One teacher did so across all three observed lessons and the other teacher did so across two lessons (her third lesson focused on vocabulary).

Though there were no statistically significant findings related to explicit instruction as a model, teachers who did implement the full model included each aspect of the model within the same lesson: introducing, modeling, collaborative practice, guided practice, and independent practice. Previous research parsed out pieces of the explicit instruction model without reporting on the relationship between the model, as a whole, and students' outcomes. The findings in this study, though limited, suggest that the explicit model as a whole yields no different relationship to student outcomes than a model of instruction that is solely based on skill application. However, consistent with previous literature (e.g., Bitter et al., 2009; Carlisle et al., 2011; Connor et al., 2004) certain aspects of the model are associated with student outcomes. Future research should explore if these aspects alone are effective without the other parts of the explicit model, or if quality, not just quantity, is an important factor in the relationship between the explicit instruction model and students' outcomes. In the next sections, I present a discussion of findings organized by each part of the explicit model of instruction.

Introduction. A key part of the explicit model of instruction is the introduction and explanation of a strategy. Duke and Pearson (2002) describe this phase as a clear explanation of

the strategy of interest and procedural information about how to use or apply the strategy. Though each teacher in this study who implemented an explicit model of comprehension instruction included an introduction, these introductions varied greatly. The number of introductory utterances within a lesson ranged from seven to 41. Not only did the amount of utterances vary, so did the content. Some introductions included solely naming the strategy and others named the strategy and briefly explained the strategy. In the example below, the teacher introduces summarizing with a brief explanation of the strategy as well as the connection to comprehension.

> Teacher: Exactly, I'm writing in my own words. Sometimes, boys and girls, paraphrasing also means that we're putting it in our own words in a shorter form. We're not using as many words to describe it. One more thing about summarizing, there was one more point that we covered, and it's gonna help if you take a look up at our pink circle map on the front, there was one more point that we learned about yesterday, Adrienne?
> Teacher: Yes, you become an active reader. When you're an active reader, what are you better able to do with the text? You're better able to what?
> Teacher: Read it and—reading it isn't just reading, and decoding, but it's also what? When you read about it, you should also be able to do this really important thing. We call this comprehension.

In this introduction to summarizing, which had been reviewed in previous lessons, the teacher names the strategy, briefly explains part of the strategy (paraphrasing), and lastly relates the use of the strategy to helping comprehension. However, the teacher never explains how to *use* the strategy. Carlisle et al. (2011) noted that students who received better explanations during instruction performed better on outcome measures. Thus, given the positive findings relating explanation to student outcomes in previous literature (Carlisle et al., 2011; Connor et al., 2004) future research should examine the quality and sequence of the introduction phase of the explicit model over an instructional cycle.

Modeling. The second step in the explicit model of instruction is modeling. In this step the teacher shows students how to use the strategy and thinks aloud about use of the strategy (Duke & Pearson, 2002). Though modeling was observed in this study, across the five lessons in which it was observed, the mean number of utterances related to modeling was only .0287. Carlisle et al. (2011) found that in addition to providing high-quality explanations, teacher modeling was positively associated with student outcomes, especially for students from low-income backgrounds. Yet, other research has suggested that teachers briefly model the use of a strategy but fail to make the modeling explicit (Parker & Hurry, 2007). In this study, teachers were observed briefly sharing their own thinking about using a strategy but quickly moving on to the next phase of instruction. They did not explicitly tell students how their own thinking could be an example for the students' thinking. For example, in the following excerpt focused on making inferences, the teacher opens with sharing her feeling of confusion and explains that she will write notes to help her understand her thinking. However, she does not make explicit how her thinking aloud is helpful for the students in making their own inferences.

> Teacher: I'm feeling confused. Okay, I'm a little puzzled about the information that we just read in the third paragraph. The article says around 800 AD. Now, I know that's the year when it took place, but it says, you guys, that something terrible happened, something terrible happened . . .
>
> . . . Maybe the article just doesn't explain it, but I'm going to write these words down from the text in my notes column and then I'm going to add over here with my thinking, the reactions, which means what I'm thinking, and also my questions.

Thus, similar to Parker & Hurry's (2007) findings, though modeling, such as that in the above example, took place within the context of the explicit model of instruction, the modeling itself was not optimally explicit. In this example, the teacher did not make explicit that she was making an inference, and how her notes would help her to do so. Future research should

incorporate measures of quality in addition to frequency of modeling to provide further insight into the relationship between instruction and student outcome.

Collaborative practice. During collaborative practice, teacher and students work together to use a strategy. Teachers begin modeling the strategy and then ask for students to help continue the strategy use (Duke & Pearson, 2002) as the class completes the modeling example together. In the example below, the teacher asks the children to make an inference about a character's age. Note that though the teacher is explicit about the strategy of interest in the introduction phase, here she implicitly asks the students to make the inference.

> Teacher: Okay, so let's go on reading, and I'm in the beginning of the fourth paragraph where it says I forgot the key. So let's go back to our story on the golden paper. Raise your hand. What grade is she in? Raise your hand, please. Evert?
> Student: First.
> Teacher: She's in first grade. I know she's in first grade. (Reading the text) Why are we locked out? Oh, no, no, no. I'm sorry. Tania, Maria asked. She was just in first grade. Who was in first grade, Evert?
> Student: Tania.
> Teacher: "Why are we locked out, Tania?" Maria asked. She was just in first grade.
> Student: Maria was.
> Teacher: Maria is in first grade, so boys and girls, off to the side of your paper, make a note. Make a note Maria first grade.
> Student: Maria first grade.
> Teacher: Let's talk about—so we have three sisters. I'm also gonna write Tania's name, and we have another sister. What's the third sister's name?
> Student: Anna.

Though this excerpt, which exemplifies collaborative practice as observed in the dataset, is a part of inference strategy instruction provided through the explicit model, the teacher's instruction , though embedded within the explicit instruction model, is mostly implicit. The teacher implicitly asks the students to make an inference and gives evaluative feedback on the

inference. When students are incorrect, the teacher responds with rereading the text and then reiterating the answer. Perhaps for this step of the model to be more successful, the teacher needed to return to an explanation of the steps for making an inference and provide scaffolds to help the students do so. Furthermore, this step of the model is collaborative, indicating that teacher and students should share responsibility. Thus, it may be important for the teacher to model her own thinking, or provide another scaffold, when students are struggling to apply a strategy. Such scaffolding and explanations have been established as important and effective elements of reading comprehension instruction (e.g., Bitter et al., 2009; Carlisle et al., 2011;Parker & Hurry, 2007; Taylor et al., 2000).

Guided practice. During guided practice, teachers and students work together to apply a strategy. Additionally, teachers help facilitate students' discussion about and use of the strategy. Furthermore, teachers provide students feedback and encouragement as they attempt to apply strategies. Lastly, when students are unable to appropriately apply the strategy, teachers regain responsibility and complete the task, while modeling and thinking aloud about the strategy.

A positive and significant association between guided practice and one student outcome measure, the WMLS, surfaced. Previous research suggests scaffolding, a key part of the guided practice part of explicit instruction, is an effective instructional strategy (e.g., Bitter et al., 2009; Parker & Hurry, 2007; Taylor et al., 2000). In fact positive associations between scaffolding and student outcomes have been replicated in the extant literature (Bitter et al., 2009; Carlisle et al., 2011). In this study, in the guided practice phase, teachers provided feedback through scaffolding while giving students a voice to practice their use of strategies and ask questions.

In the following example, the teacher guides and responds to students' practice with the strategy of interest: summarizing. Here, though the teacher is in the guided practice phase of

explicit instruction, she includes elements of introducing and modeling the strategy as she scaffolds students' learning.

> Teacher: Which we learned was the most important thing to summarizing because that helps us to do what? As a reader, it helps us to understand it better, okay? Look back at your notes. Tell me something you learned in your own words. So I don't want to see anybody looking at their notes page reading it. When you're focusing on what you learned, you also have to be able to retell it. So I want you to be able to keep your eyes on me and tell me some new learning that you had today through your reading. Take a couple moment—take a couple moments and think about that learning, okay?. . . Okay, so there were people on this earth 25,000 years ago. Okay, thank you, Student?
> Student: I learned that there was a land bridge.
> Teacher: There was a land bridge, good, connecting Asia to North America, good thinking. Willy?
> Student: I learned that they caused this big bridge.
> Teacher: Okay and so Student just mentioned that land bridge was well, so we learned that many, many years ago that the land to the world was connected by that land bridge. What else did you learn, Leslie?
> Student: That many years ago they didn't have boats.
> Teacher: Okay, they didn't necessarily use boats yet, and we're gonna read on. We'll see if they mention anything about the use of boats, and if they had that transportation yet, Shamar? Tell me something you learned.
> Student: I forgot.
> Teacher: Then keep thinking. I'll come back to you, Calvin?
> Student: There were [inaudible 0:49:21.5].
> Teacher: Okay, so their clothes were very different. I know maybe that's maybe when you looked on. Let's focus on our notes page though, just the first page of the article. Now tell me what you learned first. What did we read first? First—
> Student: Twenty-five thousand years ago the first [all reading the first part of the article in unison].
> Teacher: We learned then that some [continuing in unison] Mexico, Central America and South America. Then, in AD 800, something terrible happened in the Maya City became deserted. What does it mean to become deserted?
> Student: [Inaudible 0:50:09.5.]
> Teacher: What does it mean if something, a city becomes deserted? Student? Everything was gone. People were gone. The city was gone. Their civilization was gone. What did we think about that? We thought that it was so strange, and then we—as a

> good reader, we became an active reader and we started thinking about what we were reading, right? We started thinking, hmm, well I wonder did everybody die? Were they attacked? Was there a natural disaster such as a storm or a flood? Or a hurricane, or something such as that? Was there a disease or an illness that everyone died and the whole civilization was lost? . . .
> So we're becoming active readers to help us better understand what we're reading. So we've also learned in the past few days that when we're reading it's always important to be doing what?
> Student: Thinking.
> Teacher: Thinking about what you're reading. Not just reading, good, so you're reading, you're going to reflect, you're going to think about it, and then you're going to go back and reread.

Prior research suggests that modeling is effective, especially for struggling readers (Book et al., 1985, Connor et al., 2004; Duffy et al., 1986, Gersten et al., 2001). Yet, in this study no positive associations between modeling and student outcomes were established for modeling as an isolated step. Perhaps then, modeling, as seen in the previous example is most effective in the context of guided practice. Future research should continue to explore quantity and quality of modeling as well as the context in which it takes place to best inform classroom instruction.

Previous studies also suggest that scaffolding is positively associated with students' outcomes on reading comprehension measures (e.g., Bitter, et al., 2009; Carlisle, 2011; Montanaro, 2012; Taylor, et al., 1998). However, it is possible that what fosters the positive association between guided practice and student outcomes is that the teacher is directly responding to students' own use and processing of a strategy, as seen in the previous example. Future research should continue to investigate the nuances of the relationship between guided practice and student outcomes.

It is important to note that a positive and significant association emerged between guided practice and only one outcome measure, the WMLS, and not both measures. The WMLS is a measure that assesses comprehension through sentence level tasks, while the GMRT assesses

comprehension through passage level tasks. Thus, this finding is somewhat limited in that results for guided practice were not consistent across comprehension measures that tapped different constructs of comprehension knowledge. As such, this limitation might be an implication that what kind of instructive is effective depends upon the measure of comprehension.

Independent practice. In the independent phase of explicit instruction, students are provided opportunity for independent practice. During independent practice, teachers reteach when individual students exhibit difficulty. This independent practice is generally conducted in a controlled context, or in one that relates to the initial strategy use. Strategy use is reinforced through opportunity to apply strategy knowledge in real texts. Here teachers reinforce with students when and why strategy use is appropriate (Duke & Pearson, 2002).

In contrast to the definition above, teachers in the present study appeared to implement instruction very similar to instruction delivered during skills-based practice. In this phase of instruction teachers typically provided evaluative comments such as, “Keep trying” or “You’re on the right track” as opposed to scaffolded feedback on students’ strategy application. Additionally, this phase of instruction usually took place while the teacher worked with small groups of students, prohibiting her from responding with feedback to students’ questions and struggles, as seen in the example below.

> Teacher: Your job right now. I have a challenge for you. Using this flow map, cuz I know we can be really wordy when we write our summaries. Using this flow map, I want you to try to summarize the story in 25 words.
> Student: Oh God.
> Student: Can you—
> Teacher: I still want the most important ideas from the story. You can't just give me 25 words that aren't really important. Use this flow map—you already have the flow map. This is to help

you turn 'em into sentences, but challenge yourself because you can do it in only 25 words.
Student: No.
Student: I got 29 words.
Teacher: If there's only 29, you just need to pick the most important ones and put them into sentences.
Student: I got it. I [inaudible 34:14].
Teacher: Do you understand?
Student: Mm-hmm.
Student: We just we try to find words to describe—25 words—
Teacher: You're going to take this, and you're going to write a summary.
Student: It has to be less than 25 words.
Teacher: See if you can do it in about 25 words. No one should get so wordy.
Student: How do you write a summary with at least 20 words?
Student: I don't think—
Teacher: You can use the ideas in this flow map cuz these are the most important ones. You just need to turn them into sentences and tweak them a little bit. . .
Student: Why does it have to rhyme or—
Student: That's gonna be real hard because [cross talk 00:34:44].
Teacher: Give it a try.

In this example, the teacher turns from her previously explicit instruction of how to use the strategy and sends the students onto independent practice with the strategy, in a new way, without answer questions or providing scaffolds. As the students engage in independent practice related to the strategy taught explicitly, the teacher works with small reading groups, making her unavailable to assist students with independent practice. Here, independent practice, embedded the explicit model, looks more like stand-alone skills-based practice in which the teacher tells students to complete an assignment, and then monitors their work and behavior with yes or no, or provides comments such as, “give it a try”. However, this instruction was not coded as purely skills-based because there was accompanying explicit instruction about the strategy. Although in the introduction and modeling phases of explicit instruction teachers may have done too much

talking or not enough high quality talking, it appears that during the independent phase teachers did not provide either enough utterances or enough high quality utterances. Future research should explore how teachers provide high quality opportunities for independent practice with embedded and constructive feedback, and findings from such research should be used to inform teacher development.

Future research should continue to observe classrooms where explicit instruction takes place regularly to gain further knowledge what about the model is and is not effective. In addition, future research should evaluate the quality of the model as a whole as well as in parts to better ascertain how to guide teachers' instructional practice.

Skills-based practice

Previous research suggests that comprehension research generally consists of assignment giving and a model of initiate-respond-evaluate (e.g., Cazden, 1998; Durkin, 1978/1979; Nystrand, 2006; Sinclair & Coulthard, 1975) the findings from this study reiterate those findings. In such instruction, Pressley et al. (1998) described that teachers often expect or tell children to implement some specific reading comprehension strategy without instruction on how to do so. Fifty-seven percent of the observed utterances related to reading comprehension strategy instruction in the present study were considered to be skills-based practice that consisted of teachers telling students to apply a comprehension strategy with little to no explanation on how to do so. Teachers were observed asking students to perform a task using a comprehension strategy (but not providing instruction about the strategy), and evaluating the students' related responses. The following selection, from a skills-based lesson related to summarizing, exemplifies this code in the data set.

> Teacher: I'm going to put you back into your groups. You're going to go to the same tables, and you're going to work on your

> summaries. I strongly suggest that you reread the article today, because it's been a whole day and you probably forgot. Then you need to create your circle map with main idea and details, and then you need to write your summary on that. . .
> Teacher: . . . Did you guys use the heading to help you think about the main idea? What about the body parts of bugs?
> Student: The needles of the bug—
> Teacher:. What did the author want you to understand by reading that section? What about the body parts of bugs? You're right on the right track. . . What did you write as your main idea, because I don't see that anywhere.
> Student:[Inaudible]
> Teacher: That's not what it says, though. That's not a sentence if you say sad. . . Why does yours say help the environment. Is that what your circle map says? Then why are you guys writing that? That's not the main idea. Yes, why would I have you do a circle map if you're just gonna ignore it? You're not ready for our graduation. How do you write a summary? You guys are giving me way too many details.

This type of skills-based practice differs from the explicit instruction examples outlined in the sections above in that here the teacher sends students into practice with the strategy completely on their own, without any accompanying instruction and provides mostly evaluative check-ins. When students do not perform how the teacher expected, the teacher made comments such as, "That's not the main idea" and "How do you write a summary?" without providing scaffolding or suggestions on how the student could find the main idea or write a summary.

Findings Related to Differences Between EO and ELL Students

There were no observed interactions between language status and instruction across all research questions. The rate of change from fall to spring did not differ for EOs and ELLs, nor did it differ dependent on the type of instruction provided. These findings reiterate those from previous research that demonstrates that comprehension instruction is not always differentially related to EO and ELL students' growth (e.g., Beck & Shanahan, 2006). However, these findings contradict the Silverman et al. (2014) indicating that content of reading comprehension

instruction was associated with different findings for EOs and ELLs. Thus, findings are inconsistent in the extant literature and warrant further investigation.

Proctor et al. (2005) noted that research on ELLs' comprehension is limited to predicting variation in ELLs' comprehension as opposed to establishing good models of comprehension instruction for ELLs. Unfortunately, this study yielded no positively significant relationship between the explicit model of instruction and student outcomes. Research suggests that effective instruction for ELLs is similar to effective instruction for non-ELLs, however teachers need to draw upon principles of second language learning to target the specific needs of ELLs (Harper & de Jong, 2004; Lucas, Villegas, Freedson-Gonzalez, 2008; Samway & McKeon, 2007). It is possible that in this study the explicit instruction model alone, or aspects of the model, such as guided practice, were not targeted enough to meet the needs of ELLs. Adding to the explicit model ideals from second language theory could enhance explicit instruction. A model such as the Input-Interaction-Output (IIO) model used in tandem with the explicit model may yield better results for ELLs. In the IIO model, there is attention to *comprehensible input* (Krashen, 1982, 2003), opportunities for *interaction* (Hatch, 1992; Long, 1996; Long & Porter, 1985; Pica, 1994) and opportunities to produce *output*, or use the target language (Swain, 1985, 2000). The IIO model for language learning explains that interaction between ELLs and more expert language users (as well as interaction between learners) promotes language learning through negotiation for meaning, modified, comprehensible input, and opportunities for learners to produce language and test new output hypotheses (Gass, 1997; Mackey, 2007; Mackey, Gass, & McDonough, 2000). Through the negotiation of meaning that occurs in interaction, ELLs not only gain access to comprehensible input but also extend their productive capabilities (Ellis, 1985; Swain, 1995).

In the current study it was unclear if teachers' input was comprehensible, so in addition, future research should examine the comprehensibility of teachers' input. If not comprehensible, it is possible that explicit instruction could possibly hinder comprehension, as students become confused by teacher talk., In addition to teachers' verbal input, future research should include measures of the use of nonverbal supports. Nonverbal supports have been documented as important additions to instruction for ELLs (Echevarria, Powers, & Stewart, 2006; Gersten & Geva, 2003; Moats, 2001) and can have significant and positive gains for older students (Carlo, August, McLaughlin, et al., 2004; Klingner & Vaughn, 1996) in comprehension.

With regard to opportunities for students to interact with language and strategies, in order for ELLs to develop their English proficiency, it is essential for them to have opportunities to practice using English in meaningful contexts (August & Shanahan, 2006) with peers (Gersten et al., 2007). Moreover, for ELLs, a body of research highlights the importance of social interaction in expanding children's comprehension of text (Davenport, Arnold, Lassman, & Lassman, 2004; Fuchs, Fuchs, & Burish, 2000; Kettman Klinger & Vaughn, 1996; Klingner & Vaughn, 1996). However, in this study, very few instances of student interaction were observed. When they were observed, it was generally unstructured group work. Future research should examine the quantity and quality of peer work in the context of explicit instruction.

Limitations

There are several limitations present in this study**.** First, because this study was exploratory and correlational, causal inferences cannot be drawn from the data. As Foorman and Schatsneider (2003) noted, in a correlational study, student growth can be attributed to comprehension instruction just as much as instruction could be attributed to students' growth in

comprehension. More research is necessary to determine to what extent these relationships are directional or can explain the effects of instruction on changes in students' outcomes.

In this study, instruction was examined through teacher utterances. While this fine grain unit of analysis allowed for careful parsing apart of an instructional model, it may have concealed other aspects important to instruction. For instance, coding at the level of teacher utterance did not allow me to take into account any nonverbal instruction that took place, although such instruction was taken into account contextually for coding when needed. Such nonverbal instruction may be especially important for ELLs (Carlo, August, McLaughlin, et al., 2004; Echevarria, Powers, & Stewart, 2006; Gersten & Geva, 2003; Klingner & Vaughn, 1996; Moats, 2001). For instance, teachers often referred to using graphic organizers or manipulatives in instruction. Accounting for these instructional moves may have highlighted differences for ELL and EO students' growth. Future research should account for teacher talk, teacher actions, and corresponding materials in coding schemes.

Additionally, I did not code for students' talk at any level. And, though student talk was taken into account to contextualize teacher utterances, more analysis of student talk could expose important insight about how teacher talk and student talk together contribute to students' comprehension outcomes. Furthermore, teacher talk was only coded at the level of type of instruction within the specific framework of explicit strategy instruction or skills-based practice that did not account for whether a teacher initiated utterances or was responding to student utterances. These considerations in future research may uncover differences in instructional effectiveness (e.g., Montanaro, 2012; Shute, 2008).

Another limitation is that, as a secondary data analysis, this study was restricted to the number of observations conducted in the original study. Although this "snapshot" approach to

observing instruction three times is in line with previous research (e.g., Al Otaiba et al., 2008; Silverman et al., 2014) I was not able to fully understand the nature of instruction over the course of the school year. For instance, I did not measure if the amount of explicit instruction or parts of the explicit instruction model (e.g., modeling, guided practice, etc.) were scaled back over the school year or in the sequence of providing instruction about a particular strategy. For instance, perhaps in the beginning of the year a teacher's instruction consisted of more modeling while later in the year instruction mostly consisted of guided practice. Additionally, I was not able to control for where in the instructional cycle observations occurred (e.g., maybe most observations took place on "vocabulary heavy days"). Perhaps future research should occur within the context of a particular unit's worth of consecutive instruction (e.g. curriculum unit, week, month, semester, year), in order to explore how a particular lesson falls within the teaching of a new skill. In addition, because the duration of observations varied, I prorated the observation time to 60 minutes, the average time observed. However, the prorating may have skewed data. Thus, in future inquiries, time of observations should be controlled to account for this limitation.

The limited number of observations of explicit instruction in this study may have contributed to the lack of findings related to explicit instruction. One possibility for the few statistically significant results could be the frequency of zero in the data set. That is, teachers generally provided a given type of instruction or they did not. For instance, for one teacher, all three observations all of her comprehension strategy instruction were coded as explicit. On the other hand, other teachers provided all skills-based practice or no comprehension instruction at all.

Because this study was exploratory in nature, a number of statistical models were analyzed and the number of models was not accounted for in the analytic process. Thus, more

research is needed to substantiate, confirm, and provide more details regarding the one statistically significant finding--that guided practice positively impacted comprehension scores of ELLs/all students - from the present study. In addition, the clustering of data at the teacher level was not accounted for in analysis through hierarchical linear modeling or the use of robust standard errors. This study did not include enough teachers and students to conduct these analyses, and thus was exploratory in nature. However, future research should conduct similar work with a larger sample size that allows for such statistical analyses.

Lastly, though there were two assessments that tapped different facets of reading comprehension and in different ways used in this study, the current study was nonetheless limited by the use of these two assessments. Specifically, the goal of this study was to explore the relationship between strategy instruction and outcomes, but neither of the assessments measured strategy knowledge. Thus, future work should include assessments to measure strategy knowledge and use.

Future Directions

There are a number of future directions for research that emerge from the present study. These directions include examination of quality of instruction, teacher intent, additional comprehension measures, inclusion of observations of expert teachers, further investigation into how teachers provided scaffolds, and augmented observation methods. Suggestions for each of these future directions is described below.

The present study only examined the frequency of types of observed instruction and the relation of those types of instruction to student outcomes. This study did not include a measure of quality of teacher utterances. Given the few statistically significant findings and suggestions by previous researchers that lack of findings may have been related to quality of instruction,

future research should expand on this work to see if quality of each type of instructional utterance is related to student outcomes in comprehension.

The present study only examined teacher practice, and did not include measures to capture what teachers intended to do during their instruction. It is possible that teachers believed they were providing explicit instruction, or intended to provide explicit instruction during the observed lessons. However, very little explicit instruction was observed. Interviewing teachers about their intent would provide insight into teachers' thoughts about creating lessons that in turn could help influence pre- and in-service teacher development.

In the present study, comprehension was measured with two assessments, one that assessed comprehension at the sentence level and one that assessed it at the passage level, however there was no assessment which measured students' strategy knowledge and use. Thus, future research should measure student outcomes using a measure such as the Assessment of Strategic Knowledge and Use for Informational Text (ASKIT, Ritchey, Speece, Silverman, & Montanaro, n.d.) or the Concepts of Comprehension Assessment (COCA, Billman et al., n.d.). These measures tap students' knowledge of strategy use as they read as opposed to simply measuring text comprehension as an outcome. Another approach is the think aloud protocol (e.g. Presley & Afflerbach, 1995), in which students verbalize thinking about strategy use during reading. Such an approach would allow insight into if students internalize the talk teachers' use during modeling.

A limitation of this study was the number of observations conducted. Though previous research reported that three observations is a stable measure of instruction (e.g., Al Otaiba, et al., 2008; Smolkowski & Gunn, 2012) and other researchers have used three observations in their work (e.g., Silverman, et al., 2014; Connor et al., 2004), in this study three observations was not

enough to capture the type of instruction of interest. Thus, three observations may not be a thorough measure of all types of instruction. As such, future research should aim to capture comprehension strategy instruction using different models of observation investigation.

Given the paucity of explicit instruction observed in this study, more information is needed on how teachers implement such instruction in their classes. One possible solution is to purposefully sample teachers that are excellent at implementing explicit instruction and create a case study. Such a case study would allow for training of pre- and in-service teachers and create a better model for how to implement explicit instruction. Additionally, it would be helpful to gain students' insights into expert teachers' explicit instruction. One question that lingered from the present study was whether or not teacher talk was comprehensible. Questioning students' about this would prove invaluable. And, as this study included students from different language backgrounds, so too should this line of future research.

Last, guided practice was positively and statistically significantly associated with student comprehension outcomes. Guided practice included scaffolding, but it was beyond the scope of the present study to investigate the types of scaffolds that were associated with student outcomes. As a result, future research should continue to investigate the types of and quality of scaffolds that are associated with students' reading comprehension outcomes.

Summary

This study contributes to the literature as it suggests nuances exist in the widely accepted explicit model of instruction. Findings suggest that the explicit model as a whole is not associated with different outcomes than skills-based practice. However, within the explicit instruction model, guided practice is associated with greater outcome measure scores. These

findings suggest the need to further investigate the quality of instruction in tandem with the quantity of comprehension instruction focused on reading strategies.

Appendix A

Summary of Findings by Literature Review Guiding Questions

Authors	RQ1: Observed Reading Comprehension Practices	RQ2: Relationship to Outcomes	RQ3: Number of ELLs & Relationship to outcomes
General Reading Observations			
Bitter, O'Day, Gubbins, & Socias (2009)	Emphasis on comprehension of connected text. Related to teacher-student interactions: High levels of scaffolded instruction observed. Related to accountable talk: an emphasis on ideas and evidence.	Practices related to the higher-level meaning of text, writing instruction, and strategies for accountable talk associated with growth in students' reading comprehension. Positive relationship established between teacher's coaching and scaffolding and overall literacy achievement. Negative relationship established between comprehension skill instruction and students' overall literacy achievement.	Large population of ELLs (between 25% and 79%) Negative relationship between instruction related to higher-level meaning of text and overall student literacy outcomes for ELLs
Pressley, Wharton-McDonald, Mistretta-Hampston, & Echeverria (1998)	Observed literature-based instruction, skills instruction, reading during class, explicit vocabulary instruction, and small group reading instruction, "practice of comprehension of strategies, but virtually no instruction in strategy use"	Not explored	Not explored
Taylor, Pearson, Clark, & Walpole (2000)	Across classrooms observed: picture walks; making predictions; text-based questions; higher-level questions; aesthetic-response questions; writing in response to reading; story map; retell a story; and comprehension skill or strategy instruction 10 or more teachers included: text-based questions; higher-level questions; and writing in response to reading	Positive student literacy outcomes related to higher frequency of teacher scaffolding and coaching. Negative relationship between instruction related to comprehension skills instruction and overall literacy achievement	Not explored
Reading Comprehension Observation Only			
Durkin (1978/1979)	Less than 1 % of time observed (28 minutes total) devoted to comprehension instruction. 17.65 % of all instruction	Not explored	No SES info reported

Appendix B

Summary of Observation Methods

Author	Observation Data Collection-Amount	Observation Data Collection-Method	Observation Unit of Analysis	Observation Data Coding Scheme	Observation Analysis
General Reading Observations					
Bitter, O'Day, Gubbins, & Socias (2009)	Three 90-minute observations of Kindergarten – 5th grade classrooms over the course year (5 total across 2 school years, only 3 included in analysis).	Recorded running notes in 5-minute segments related to classroom activities and talk. After each 5-minute, observers spent two minutes to clean notes and coded their notes. After every three five minute segments researchers coded the three previous segments for instances of "accountable talk" (1 if scaffolding was observed and 2 if high levels of interaction.	Instances of scaffolding & instructional activities	7 categories (of total of 80 total codes) person providing instruction; groupings; activity area; materials; instructional activity; teacher student interaction	Calculated across all three observations in one school year the proportion of five minute observation segments in which the observer coed a instructional activity or interaction style. Calculated averages across all of the teachers. For accountable talk, values averaged across all teachers' segments in a year to provide an average for each teacher. Created averages across teachers.
Pressley, Wharton-McDonald, Mistretta-Hampston, &	Classroom observations of 4th and 5th grade classrooms twice a	Researchers were guided by grounded theory approach and thus data collection and analysis were conducted	Constant comparison—not a finite unit of analysis	Dimensions of instruction: Reading instruction; writing instruction; materials; primary instructional goals;	Collected and analyzed simultaneously. Built codes and dimensions of instruction

Echeverria (1998)	month (over 6 months) for each teacher. Observations ranged from 50 -150 minutes.	simultaneously. Researchers recorded field notes about the activities in the classrooms and transcripts of teacher interviews were recorded. Transcripts and field notes were analyzed in order to develop coding scheme.		management; motivational orientation; density of instruction; student engagement Categories were established based on codes: activities, class grouping, instructional objectives, teacher affect, student affect, teacher language, student language, materials, and classroom arrangement.	based on instruction within and across classrooms until no more codes emerged. Summaries of each classroom. Applied summaries to report on common and different practices across classrooms as well as case studies.
Taylor, Pearson, Clark, & Walpole (2000)	Monthly one-hour observation of reading instruction in 3rd-5th grade classrooms over the course of 5 months	Observers focused on teachers and children. Recorded noted about classroom activity and classroom dialogue. Every five minutes recorded if they observed (in the previous five minutes) any teacher behavior related to coaching/scaffolding; modeling; engaging in recitation; explaining; leading discussion. Recorded general notes related to general impressions; classroom management; classroom environment, etc.	Predetermined teacher behaviors	Style Coaching/scaffolding; Modeling/ demonstrating; Engaging students in recitation; Telling students information; Explaining how to do something; Engaging students in discussion	Frequency counts of teacher behaviors related to coding scheme.
<u>Reading Comprehension Observation Only</u>					
Durkin (1978/1979)	Observed each 3rd-6th-	Researchers collected written	instructional activity	Pre-established codes related to reading	Observation notes were

	grade classroom on three successive full days.	observation data on teachers about time; activity; audience (whole group, small group, etc.) and source (workbook, manual, etc.).		comprehension: comprehension-instruction; comprehension-review of instruction; comprehension-application; comprehension-assignment; comprehension-help with assignment; comprehension-preparation for reading; comprehension-assessment; comprehension-prediction; study skills-instruction; study skills-review of instruction; study skills-application; study skills-assignment; assignment-gives; assignment-helps with; assignment-checks; oral reading-instruction; oral reading-application; phonics-instruction; phonics-review; phonics-application; structural analysis-instruction; structural analysis-review; structural analysis-application; word meanings-instruction; word meanings-review; word meanings-applications	coded for type and amount of time spent on each of the pre-established code categories.
Ness (2011)	Data was collected in 1st -5th grade	Researchers coded teacher behavior every 30 seconds.	Teacher actions	vocabulary, predicting/prior knowledge,	Coded for specific comprehension

	classrooms in 2 elementary schools. Each teacher was observed for 120 (5, 30-minute blocks) over the course of a school year.	Multiple codes could be applied to each 30-second section. At the end of each observation, codes were tallied. When the class was engaged in multiple activities, the researchers coded the teacher's behavior were applied.		comprehension monitoring, text structure, question answering, question generation, summarization, visual representation, and multiple strategy instruction) and noncomprehension (i.e. silent or oral reading, word skills, writing, assignment, transition, noninstruction, oral language, or technology)	related strategies only if strategies presented in the context of some element of explicit instruction model (e.g., explicit description of strategy and how to use it, modeling of the strategy, collaborative use of the strategy, guided practice of the strategy, or independent use of the strategy) Analyzed data based on total frequency counts
Parker & Hurry (2007)	Observed one literacy class of participating 2^{nd} -6^{th} grade teachers (ranging from 45 min- 1 hour).	Videotaped lessons. Transcript of all questions (from teachers or students) and teachers' responses to students' questions which took place within a lesson	Each student-teacher interaction	teacher questioning (teachers ask a direct question); teacher modeling (teacher models a comprehension strategy); teaching explicit strategies (teacher gives students explicit strategy); pupil questioning (student initiates his/her own question)	Coding based on content analysis. For analysis only analyzed lessons that included: shared reading; comprehension of fiction; non-fiction text; or guided reading Each student-teacher interaction was analyzed resulting in the researchers grouping the

					interactions into the four main categories.
Reading Comprehension Observations and Outcomes					
Carlisle, Kelcey, Berebitsky, & Phelps (2011)	Four observations of entire literacy blocks in 3rd grade classrooms	During five minute intervals, observers recorded information about the following fields: purpose of the lesson, the grouping arrangement (e.g., whole class), materials used in the lesson, instructional actions, word meaning actions, and average number of students actively engaged in the lesson	"Instructional action"	Analyzed lessons that included text, were taught to the whole class, small group, or individual (resulted in only 27% of observed lessons included).	Calculated proportion of lessons in which each instructional action was used. Then these proportions of instructional actions were sorted by theoretical dimension.
Connor, Morrison, & Petrella (2004)	Three day-long observations of 3rd grade classrooms	Documented timed-narrative descriptions of instructional activities of one minute or longer.	Instructional activities	Instructional activities (19 total): language arts; math; social studies, etc. 99 subactivities established with 19 subactivities for language arts: teacher read-aloud; student read-aloud, individual; student read-aloud, choral; silent sustained reading; teacher-managed group writing; writing instruction; teacher model writing; student group writing; student independent writing; spelling; discussion; reading comprehension activity; reading	Language arts subactivity codes were grouped by dimension (i.e., teacher-managed explicit reading comprehension; child-managed explicit reading comprehension; teacher-managed implicit word level; child-managed implicit word level; teacher-managed implicit higher order; child-managed implicit higher order. Created

				comprehension strategies; alphabet activity; letter sight/sound; initial consonant stripping; word segmentation; vocabulary; conventions of text	variables representative of amount of instructional activity in minutes per day.
Silverman, Proctor, Harring, Doyle, Mitchell, & Meyer (2014)	Three classroom observations of entire literacy block of participating 3rd – 5th grade teachers	Observations were transcribed and applied a unique code to each teacher utterance.	Each teacher utterance	Reading comprehension instruction subcodes: inferential comprehension; literal comprehension; comprehension strategies; text elements; decoding and fluency.	Codes established based on the extant literature and observations conducted in a pilot year. Calculated frequency of each code within each lesson. All codes were prorated to relative frequency within 60 minutes (average for lessons).

Appendix C

Summary of Reading Comprehension Measures

Author	Assessment	Description	Length of Text
Bitter, O'Day, Gubbins, & Socias (2009)	Degrees of Reading Power (DRP)	Students read passages with missing words then chose a word to fill the blank from multiple-choice options.	short passages
	California Standards Test Reading Comprehension Subtest	Not reported	not reported
	Developmental Reading Assessment	Students read leveled books while teachers recorded word reading accuracy and responses to comprehension questions in order to establish word identification and comprehension levels.	leveled books
Carlisle, Kelcey, Berebitsky, & Phelps (2011)	Iowa Tests of Basic Skills (ITBS) Reading Comprehension Subtest	Students read short passages and selected answers to comprehension questions.	short passages
Connor, Morrison, & Petrella (2004)	Peabody Individual Achievement Test-Revised (PIAT-R) Reading Comprehension Subtest	Students silently read silently and then selected one picture (out of four) that matched what they read.	sentences
Silverman, Proctor, Harring, Doyle, Mitchell, and Meyer (2014)	Woodcock-Munoz Language Survey (WMLS) Passage Comprehension (Woodcock et al., 2005) subtest	Students silently read cloze passages (beginning with sentences and increasing in difficulty) and selected a word to fill the blank.	sentences and progresses to passage
	Gates-MacGinitie Reading Test, Fourth Edition (GMRT; MacGinitie, MacGinitie, Maria, & Dreyer, 2002) reading comprehension	Student silently read a series of grade-level appropriate passages and then answered multiple-choice questions (including	passages

	subtest	explicit and implicit questions) about the passage in a 35-minute time period.	
	Test of Sentence Reading Efficiency and Comprehension (TOSREC; Wagner, Torgesen, Rashotte, & Pearson, 2010)	Students read and chose whether sentences were true or false during a three-minute test.	sentences
Taylor, Pearson, Clark, and Walpole (2000)	Qualitative Reading Inventory-II (QRI-II)	Students read short leveled text and completed a retell that was scored on a four point scale	leveled text

References

Aarnoutse, C., VanLeeuwe, J., Voeten, M., & Oud, H. (2001). Development of decoding, reading comprehension, vocabulary and spelling during the elementary school years. *Reading and Writing, 14*(1), 61-89.

Afflerbach, P., Pearson, P. D., & Scott, S. G. (2008). Clarifying differences between reading skills and reading strategies. *The Reading Teacher, 61*, 364-373. doi:10.1598/RT.61.5.1

Al Otaiba, S., Connor, C., Lane, H., Kosanovich, M.L., Schatschneider, C., Dyrlund, A.K., ... &Wright, T.L. (2008). *Reading First* kinder- garten classroom instruction and students' growth in phonologi- cal awareness and letter naming–decoding fluency. *Journal of School Psychology, 46(3),* 281–314. doi:10.1016/j.jsp.2007.06.002

Applebee, A.N., Langer, J.A., Nystrand, M., & Gamoran, A. (2003). Discussion-based approaches to developing understanding: Classroom instruction and student performance in middle and high school English. *American Educational Research Journal, 40(3),* 685–730. doi:10.3102/00028312040003685

Au, K.H. (2009). Promoting powerful comprehension. *Reading Today*, *27*(2), 17.

August, D., & Shanahan, T. (2006). Developing literacy in second-language learners. Report of the National Literacy Panel on Language-Minority Children and Youth. Mahwah, NJ: Lawrence Erlbaum Associates.

Aukrust, V.G. (2007). Young children acquiring second language vocabulary in preschool group-time: Does amount, diversity, and discourse complexity of teacher talk matter? *Journal of Research in Childhood Education, 22(1),* 17–37. doi:10.1080/0256854 0709594610

Bandura, A. (1977) Self-efficacy: Toward a unifying theory of behavior change. *Psychological Review* 84(2), 191-215.

Barton, P.E., & Jenkins, L. (1995). *Literacy and dependency: The literacy skills of welfare recipients in the United States*. Princeton, New Jersey: Educational Testing Service.

Baumann, J. F., Edwards, E. C., Bolan, E. J., Olejnik, S. & Kame'enui, E. J. (2003). Vocabulary tricks: Effects on instruction in morphology and context on fifth-grade students' ability to derive and infer word meanings. *American Education Research Journal, 40*(2), 447-494. doi:10.3102/00028312040002447

Bellack, C., Kleibard, H., Hyman, R., & Smith, F. (1966). *The lan- guage of the classroom.* New York, NY: Teachers College Press.

Bitter, C., O'Day, J., Gubbins, P., & Socias, M. (2009). What works to improve student literacy achievement? An examination of instructional practices in a balanced literacy approach. *Journal of Education for Students Placed at Risk, 14*, 17-44. doi: 10.1080/10824660802715403.

Block, C.C., & Pressley, M. (2001). *Comprehension instruction: Research-based best practices.* New York: Guilford.

Bowers, E.P., & Vasilyeva, M. (2011). The relation between teacher input and lexical growth of preschoolers. *Applied Psycholinguistics, 32(1),* 221–241. doi:10.1017/S0142716410000354

Boyd, M.P., & Rubin, D. (2002). Elaborated student talk in an elementary ESoL classroom. *Research in the Teaching of English, 36(4),* 495–530.

Calderón, M., Slavin, R., & Sánchez, M. (2011). Effective instruction for English learners. *The Future of Children, 21*, 103-128.

Carlisle, J., Kelcey, B., Berebitsky, D., & Phelps, G. (2011). Embracing the complexity of instruction: A study of the effects of teachers' instruction on students' reading comprehension. *Scientific Studies of Reading, 15*(5), 409-439. doi:10.1080/10888438.2010.497521

Carlo, M. S., August, D., McLaughlin, B., Snow, C. E., Dressler, C., Lippman, D. N., Lively, T. J., & White, C. E. (2004). Closing the gap: Addressing the vocabulary needs of English language learners in bilingual and mainstream classrooms. *Reading Research Quarterly, 39*, 188-206.

Catts, H.W., Compton, D., Tomblin, J.B., & Bridges, M.S. (2012). Prevalence and nature of late-emerging reading disabilities. *Journal of Educational Psychology, 104(1),* 166–181. doi:10.1037/a0025323

Cazden, C. B. (1998). Classroom discourse: The language of teaching and learning. Portsmouth, NH: Heinemann.

Chall, J.S., & Jacobs, V.A. (2003). Poor children's fourth-grade slump. *American Educator, 27(1),* 14–15.

Chaudron, C. (1988). *Second language classrooms: Research on teaching and learning.* Cambridge, UK: Cambridge University Press. doi:10.1017/CBO9781139524469

Cohen, J. (1960) A coefficient of agreement for nominal scales. *Educational and Psychological Measurement*, 20, 37-46.

Connor, C. M., Morrison, F. J., & Petrella, J. (2004). Effective reading comprehension instruction: Examining child x instruction interactions. *Journal of Educational Psychology, 96*(4), 682-698. doi:10.1037/0022-0663.96.4.682

Crookes, G. (1990). The utterance, and other basic units for second language discourse analysis.

Applied Linguistics, 11(2), 183–199. doi:10.1093/applin/11.2.183

Cutting, L.E., & Scarborough, H.S. (2006). Prediction of reading comprehension: Relative contributions of word recognition, lan- guage proficiency, and other cognitive skills can depend on how comprehension is measured. *Scientific Studies of Reading, 10(3),* 277–299. doi:10.1207/s1532799xssr1003_5

Datnow, A., & Castellano, M. (2000). Teachers' responses to Success for All: How beliefs, experiences and adaptations shape implementation. *American Educational Research Journal, 37*, 775-799.

Davenport, S., Arnold, M., Lassmann, M., & Lasmann, M. (2004). The impact of cross-age tutoring on reading attitudes and reading achievement. *Reading Improvement, 41*(1), 3-12. Retrieved from Professional Development Collection database.

Dickinson, D. K., & DeTemple, J. M. (1998). Putting parents in the picture: Maternal reports of preschoolers' literacy as a predictor of early reading. *Early Childhood Research Quarterly, 13,* 241–261.

Dickinson, D.K., & Porche, M.V. (2011). Relation between language experiences in preschool classrooms and children's kindergarten and fourth-grade language and reading abilities. *Child Development, 82(3),* 870–886. doi:10.1111/j.1467-8624.2011.01576.x

Duffy, G.G., Roehler, L.R., & Rackliffe, G. (1986). How teachers' instructional talk influences students' understanding of lesson content. *The Elementary School Journal, 87(1),* 3–16. doi:10.1086/461476

Duke, N. K., & Pearson, P. (2002). Effective practices for developing reading comprehension. In A. E. Farstrup & S. Samuels (Eds.), What research has to say about reading instruction (pp. 205-242). Newark, DE: International Reading Association.

Durkin, D. (1978/1979). What classroom observations reveal about reading comprehension instruction. *Reading Research Quarterly, 14*, 481-533. doi:10.1598/RRQ.14.4.2

Eagan, B.A. (2009). Learning conversations and listening pedagogy: the relationship in student teachers' developing professional identities, *European Early Childhood Education Research Journal,* 17, 43–56.

Echeverria, J., Short, D., & Powers, K. (2006). School reform and standards-based education: A model for English-language learners. *Journal of Educational Research, 99*, 195-210.

Ellis, R. (1985). *Understanding second language acquisition.* Oxford: Oxford University Press

Englert, C. S., & Semmel, M. I. (1983). Spontaneous teacher decision making in interactive contexts. *Journal of Educational Research, 77*, 112-121.

Englert, C. S., & Tarrant, K. L. (1995). Creating collaborative cultures for educational change. Remedial and Special Education, 16(6), 325–336, 353.

Fisher, D., & Frey, N. (2007). *Checking for understanding: Formative assessment techniques for your classroom.* Alexandria, VA: Association for Supervision and Curriculum Development.

Flanders, N. (1970). *Analyzing teacher behavior.* New York, NY: Addison-Wesley.

Foorman, B.R., & Schatschneider, C. (2003). Measurement of teaching practices during reading/language arts instruction and its relationship to student achievement. In W.R. Vaughn, & K.L. Briggs (Eds.), *Reading in the classroom: Systems for the observation of teaching and learning* (pp. 1–30). Baltimore, MD: Brookes.

Fuchs, D., Fuchs, L., & Burish, P. (2000). Peer-assisted learning strategies: An evidence-based practice to promote reading achievement. *Learning Disabilities Research & Practic*e (Lawrence Erlbaum), *15*(2), 85-91. Retrieved from Professional Development Collection

database.

Gass, S. M. (1997). Input, interaction, and the second language learner. Mahwah, NJ: Lawrence Elrbaum.

Gersten, R., Baker, S. K., Shanahan, T., Linan-Thompson, S., Collins, P., & Scarcella, R. (2007). *Effective literacy and English language instruction for English learners in the elementary grades: A practice guide* (NCEE 2007-4011). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from httm://ies.ed.gov/ncee/wwc/publications/practiceguides.http://ies.ed.gov/ncee/wwc/pdf/practiceguides/20074011.pdf

Gersten, R., & Geva, E. (2003). Teaching reading to early language learners. *Educational Leadership,* 60(7), 44–49.

Gray, J. L. (2012). The relationships between teacher variable and outcomes for language minority learners in grades 3-5 on measures of vocabulary knowledge and reading comprehension. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Grosjean, J. (2010). *Bilingual: Life and reality.* Cambridge, MA: Harvard University Press.

Hatch, E. (1992). *Discourse and language education*. Cambridge, UK: Cambridge University Press.

Hsieh, H-F. & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*, 1277-1288. doi: 10.1177/1049732305276687

Jenkins, J. R., & Leicester, N. (1992). Specialized instruction within general education: A case study of one elementary school. *Exceptional Children, 58,* 555-563.

Kamil, M. L., Borman, G. D., Dole, J., Kral, C. C., Salinger, T., & Torgesen, J. (2008). *Improving adolescent literacy: Effective classroom and intervention practices.* NCEE 2008-4027). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://ies.ed.gov/ncee/wwc/pdf/practice_guides/adlit_pg_082608.pdf

Keenan, J.M., Betjemann, R.S., & Olson, R.K. (2008). Reading com- prehension tests vary in the skills they assess: Differential de- pendence on decoding and oral comprehension. *Scientific Studies of Reading, 12(3),* 281–300. doi:10.1080/108884308 02132279

Kettman Klingner, J. & Vaughn, S. (1996). Reciprocal teaching of reading comprehension strategies for students with learning disabilities who use English as second language. *The Elementary School Journal, 96(3)*, 275-293.

Kelcey, B. & Carlisle, J. F. (2013). Learning about teachers' literacy instruction from classroom observations. *Reading Research Quarterly, 48*, 301-317. doi:10.1002/rrq.51

Klingner. J.K., & Vaughn. S. (1996). Reciprocal teaching of reading comprehension strategies for students with learning disabilities who use English as a second language. *Elementary School Journal, 96*, 275-293.

Klingner, J. K., Vaughn, S., Argüelles, M. E., Hughes, M. T., & Ahwee, S. (2004). Collaborative strategic reading: "Real world" lessons from classroom teachers. *Remedial and Special Education, 25*, 291-302.

Knapp, M. S., & Associates (1995). *Teaching for meaning in high-poverty classrooms.* New York: Teachers College Press.

Krashen, S. D. (1982). Principles and practice in second language acquisition. Oxford: Pergamon.

Kucan, L. & Beck, I. L. (1997). Thinking aloud and reading comprehension research: Inquiry, instruction, and social, interaction. *Review of Educational Research, 67*, 271-299.

Leider, C.M., Proctor, C.P., Silverman, R.D., & Harring, J.R. (2013). Examining the role of vocabulary depth, cross-linguistic transfer, and types of reading measures on the reading comprehension of Latino bilinguals in elementary school. *Reading and Writing, 26(9),* 1459–1485.

Lesaux, N. K., & Geva, E. (2006). Synthesis: Development of literacy in language-minority students. In D. August & T. Shanahan (Eds.), Developing literacy in second-language learners (pp. 53-74). Mahwah, NJ: Erlbaum.

Lesaux, N. K., Koda, K., Siegel, L. S., & Shanahan, T. (2006). Development of literacy of language minority learners. In D. L. August & T. Shanahan (Eds.) *Developing literacy in a second language: Report of the National Literacy Panel.* (pp.75□122). Mahwah, NJ: Lawrence Erlbaum Associates.

Lindsay, J.S. (1990). Classroom discourse analysis: A review of the literature with implications for educational evaluation. *Journal of Research and Development in Education, 23(2),* 107–116.

Long, M.H. (1985). Input and second language acquisition theory. In S.M. Gass, & C.G. Madden (Eds.), *Input in second language acquisition* (pp. 377–393). Rowley, MA: Newbury House.

Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In Ritchie, W. C., & Bahtia, T. K. (eds.), *Handbook of second language acquisition* (pp. 413-68). New York: Academic Press. Reprinted in Ortega, L. (ed.), *Second language acquisition*: *Critical concepts in linguistic*s. London: Routledge.

Long, M. H. & Porter, P. A. (1985). Group work, interlanguage talk, and second language acquisition. *TESOL Quarterly, 19*, 207-228.

MacGinitie, W.H., MacGinitie, R.K., Maria, K., & Dreyer, L.G. (2000). *Gates–MacGinitie reading tests: Forms S and T* (4th ed.). Itasca, IL: Riverside.

Mackey, A. 2007 *Practice in a second language: perspectives from linguistics and psychology.* DeKeyser, R. (ed.). Cambridge: Cambridge University Press, p. 85-110 26 p.

Mariage, T. V., Englert, C. S., & Garmon, M. A. (2000). The teacher as "more knowledgeable other" in assisting literacy learning with special needs students. *Reading and Writing Quarterly, 16,* 299-336.

Mehan, H & Cazden, C. B. (2013). The study of classroom discourse: Early history and current developments. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis (2nd edition). Thousand Oaks, CA: Sage Publications.

Moats, L. (2001). Overcoming the language gap. *American Educator,25,* 4–9.

Montanaro, E. (2012). Instructional behaviors and student reading outcomes in a scripted tier 2 intervention for fourth grade struggling readers. Unpublished doctoral dissertation.

Morrison, F. J., Bachman, H. J. & Connor, C. M. (2005). *Improving literacy in America: Guidelines from research*. New Haven, CT: Yale University Press.

Parker, M. & Hurry, J. (2007). Teachers' use of questioning and modelling comprehension skills in primary classrooms. *Educational Review, 59*, 299-314.

Pica, T. (1994). Research on negotiation: What does it reveal about second language learning conditions, processes and outcomes? *Language Learning 44*, 493-527.

Pressley, M. (2006, April 29). *What the future of reading research could be.* Paper presented at the International Reading Association Reading Research 2006 Conference, Chicago, Illinois.

Proctor, C. P., Carlo, M., August, D., & Snow, C. (2005). Native Spanish-speaking children reading in English: Toward a model of comprehension. *Journal of Educational Psychology, 97,* 246-256.

Proctor, C. P., Dalton, B., & Grisham, D. (2007). Scaffolding English language learners and struggling readers in a multimedia hypertext environment with embedded strategy instruction and vocabulary support. *Journal of Literacy Research*, 39, 71-93.

National Center for Education Statistics (2002). *Schools and staffing survey, 1999–2000. Overview of the data for public, private, public charter, and Bureau of Indian Affairs elementary and secondary schools.* Washington, DC: U.S. Department of Education Office of Educational Research and Improvement.

National Center for Education Statistics. (2011). *The Nation's Report Card: Reading 2011* (NCES 2012-457). Institute of Education Sciences, U.S. Department of Education, Washington, D. C.

National Clearinghouse for English Language Acquisition & Language Instruction Education Programs. Available from http://www.ncela.gwu.edu/stats/2 nationl.htm.

National Governor's Association Center for Best Practices, Council of Chief State School Officers. (2010). *Common core state standards (English language arts).* Washington, D. C.: Council of Chief State Officers.

National Institute of Child Health and Human Development. (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific*

research literature on reading and its implications for reading instruction: Reports of the subgroups. (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.

Ness, M. (2011). Explicit reading comprehension instruction in elementary classrooms: Teacher use of reading comprehension strategies. *Journal of Research in Childhood Education, 25*, 98-117. doi: 10.1080/02568543.2010.531076

Newman, A. P., Lewis, W., & Beverstock, C. (1993). *Prison literacy.* Philadelphia, PA: National Center on Adult Literacy.

No Child Left Behind (NCLB) Act of 2001, Pub. L. No. 107-110, § 115, Stat. 1425 (2002).

Palincsar, A.S. (1986). Reciprocal teaching. In *Teaching reading as thinking*. Oak Brook, IL: North Central Regional Educational Laboratory.

Nystrand, M. (2006). The social and historical context for writing research. In C. MacArthur (Ed.), Handbook of writing research (pp. 11-27). New York, NY: The Guilford Press.

Nystrand, M., Wu, L., Gamoran, A., Zeiser, S., & Long, D. (2003). Questions in time: Investigating the structure and dynamics of unfolding classroom discourse. *Discourse Processes, 35(2),*135–198. doi:10.1207/S15326950DP3502_3

Pearson, P. D., & Dole, J. A. (1987). Explicit comprehension instruction: A review of research and a new conceptualization of instruction. *Elementary School Journal, 88*, 151-165. doi:10.1086/461530

Pearson, P.D., Roehler, L., Dole, J., & Duffy, G. (1992). Developing expertise in reading comprehension. In S.J. Samuels & A.E. Farstrup (Eds.), *What research has to say about reading instruction* (2nd ed., pp. 145–199). Newark, DE: International Reading Association.

Pentimonti, J. & Justice, L. (2010). Teachers' use of scaffolding strategies during read alouds in the preschool classroom. *Early Childhood Education Journal, 37* (4), 241-248.

Potter, W. J., and Levine-Donnerstein, D. (1999). Rethinking validity and reliability in content analysis. *Journal of Applied Communication Research, 27*, 258 – 284.

Pressley, M., & Afflerbach, P. (1995). *Verbal protocols of reading: The nature of constructively responsive reading.* Hillsdale, NJ: Erlbaum.

Pressley, M., & Wharton-McDonald, R. (1998). The development of literacy, part 4: The need for increased comprehension in upper-elementary grades. In M. Pressley (Ed.), *Reading instruction that works: The case for balanced teaching* (pp. 192–227). New York: Guilford.

Reznitskaya, A. (2012). Dialogic teaching: Rethinking language use during literature discussions. *The Reading Teacher, 65*.

Rumberger, R. (2006). Where California's English Learners attend school and why it matters. *UC Linguistic Minority Research Institute Newsletter, 15*, 1-2.

Shanahan, T., Callison, K., Carriere, C., Duke, N. K., Pearson, P. D., Schatschneider, C., & Torgesen, J. (2010). *Improving reading comprehension in kindergarten through 3rd grade: A practice guide* (NCEE 2010-4038). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://whatworks.ed.gov/publications/practiceguides.

Shute, V.J. (2008). Focus on formative feedback. *Review of Educational Research, 78(1),* 153–189. doi:10.3102/003465430 7313795

Sinclair, J. M., & Coulthard, R. M. (1975). Towards and analysis of discourse: The English used

by teachers and pupils. Oxford, UK: Oxford University Press.

Silverman, R., Proctor, P., Harring, J., Doyle, B., Mitchell, M., & Meyer, A., (2014). Relationships among instructional practices and vocabulary and comprehension outcomes with English-only (EO) and English-learner (EL) students in grades 3-5. *Reading Research Quarterly, 49*.

Smith, A. F. & Prentice, D. A. (1993). Exploratory data analysis. In A.F. Smith & D. A. Prentice, Ed. *A handbook for data analysis in the behavioral sciences: statistical issues* (pages 349-390).

Smolkowski, K., & Gunn, B. (2012). Reliability and validity of the Classroom Observations of Student–Teacher Interactions (COSTI) for kindergarten reading instruction. *Early Childhood Research Quarterly, 27(2),* 316–328. doi:10.1016/j.ecresq.2011.09.004

Snow, C. E. (2001). *Reading for understanding: Toward an R&D program in reading comprehension.* Santa Monica, CA: RAND.

Strauss, A., & Corbin, J. (1990). Basics of qualitative research: Grounded theory procedures and techniques. Newbury Park, CA: Sage.

Svensson, I., Lundberg I., & Jacobson, C. (2003) The nature of reading difficulties among inmates in juvenile institutions. *Reading and Writing, 16*, 667-691, doi: 10.1023/A:1025832815286

Swain, M. (1985) Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In Gass, S. and Madden, C. (Eds.), Input in Second Language Acquisition, pp. 235-256. New York: Newbury House. Oxford University Press.

Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (Ed.), Sociocultural theory and second language learning (pp. 97-114). Oxford, United Kingdom: Oxford University Press.

Sum, A., Kirsch, I. & Taggart, R. (2002). *The twin challenges of mediocrity and inequality: literacy in the U.S. from an international perspective.* Princeton, NJ: Educational Testing Service.

Tashakkori, A. & Tedlie, C. (1998). Mixed methodology: combining qualitative and quantitative approaches. Thousand Oaks, CA: Sage Publications.

Taylor, B. M., Pearson, P. D., Clark, K., & Walpole, S. (2000). Effective schools and accomplished teachers: Lessons about primary grade reading instruction in low-income schools. *Elementary School Journal, 101*(2), 121-166

Taylor, B. M., Pearson, P. D., Peterson, D. S., & Rodriguez, M. C. (2003). Reading growth in high-poverty classrooms: The influence of teacher practices that encourage cognitive engagement in literacy learning. *Elementary School Journal. 104,* 3-28.

Vaughn, S. & Ortiz, A. (no date). Response to intervention in reading for English language learners. Retrieved March 1, 2015 from http://www.rtinetwork.org/learn/diversity/englishlanguagelearners

Vygotsky, L. (1978). Interaction between Learning and Development (pp. 79-91). In Mind in Society. Cambridge, MA: Harvard University Press.

Walqui, A. (2006). Scaffolding instruction for English language learners: A conceptual framework. The International journal of Bilingual Education and Bilingualism, 9(2), 159-180.

Wasik, B. A., & Bond, M. A. (2001). Beyond the pages of a book: Interactive book reading and language development in preschool classrooms. *Journal of Educational Psycology, 93*(2),243- 250.

Wood, D., Bruner, J., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry, 17*, 89-100.

Woodcock, R.W., Muñoz-Sandoval, A. F., Ruef, M. L., & Alvarado, C. G. (2005). *Woodcock–Muñoz Language Survey–revised.* Rolling Meadows, IL: Riverside.