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Close reading strategies applied by English Language Learners when reading challenging content area texts

Laura Barry
Rowan University

CLOSE READING STRATEGIES APPLIED BY ENGLISH LANGUAGE LEARNERS WHEN READING CHALLENGING CONTENT AREA TEXTS

by

Laura C. Barry

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Dedications

I would like to dedicate this manuscript to my husband, Tommy, and my daughter, Shaela. Their oft-tested patience and support gave me the opportunity and encouragement I needed to complete this project. Shaela, especially, who was five years old at the time I wrote this, sacrificed so many hours that the saying "you'll play with me when you're finished your homework" became commonplace. I am eternally grateful to her for her independence, understanding, and unconditional love.

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Abstract

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Stephanie Abraham, Ph.D.
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The study introduced high school English Language Learners to close reading strategies to use when reading difficult content area texts, with a particular focus on discussion, prior knowledge, vocabulary, and self-generating questions. The students participated in multiple measures to see if they developed metacognitive awareness in employing the strategies. Findings revealed that the students adapted quickly to using the strategies with teacher support, and that they began to internalize them. Implications for teacher research are discussed.

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Chapter 1

Introduction

"Learning another language is not only learning different words for the same things, but learning another way to think about things."

Flora Lewis

The ring of the late bell echoes in my ears, but before I can open my mouth to begin my lesson, my English Language Learners (ELLs) beat me to it. In voices edged with frustration, they express how they are overwhelmed by their mainstream academic assignments; I pause a moment to reflect. This is not the first time this scene has occurred. The students feel safe within the confines of our ELL classroom, and they trust that I am here to help them. As a seasoned teacher, it takes only a matter of seconds for me to assess how I can adjust my lesson plans so that I may assist my students with their work. I explain the adjustment, and the relief is visible as they take out their assignments.

Piya, a quiet girl from India, is the first to raise her hand. "Mrs. Barry, can you help me?" she asks quietly, pointing to a packet on her desk, "I don't understand what I have to do." This scenario has played out so many times over the past eight years that I know exactly what awaits me as I approach her. My suspicions are confirmed when I see a content area reading that is way above the proficiency level of the ELL requesting my assistance. In this instance, it is a reading about light waves that is so challenging, I shake my head in bewilderment and wonder if it came from a college-level text. I help Piya to the best of my ability, with frequent interruptions from other students in need, prompting her to find what I believe are the correct answers to the text-based questions she is required to answer.

When I first began teaching ELL, I quickly learned that this routine would occur on a regular basis. I have frequently put my own lessons on hold to devote time to helping my students struggle through difficult content area texts, jumping from student to student, spread so thin that I can only give each student enough help to get a few answers on their paper, and hope that they are graded on effort. Communicating with the content area teachers about making modifications has done little to alter the issue, for several reasons that I will later discuss; besides, I have concluded that this is, perhaps, not the best way to go about improving the situation. ELLs will continue to be given challenging content area texts in their mainstream classes. What, then, can I do to help them become more adept at tackling these texts? Is it possible for ELLs to develop the skills to handle these texts on their own?

Purpose Statement

The purpose of the current study is to see what happens when high school ELLs apply close reading strategies while reading challenging content area texts independently. As the above scenario demonstrates, my experience has been that ELLs are ill-prepared when presented with these texts; after years of uninformed, mediocre intervention on my part, I decided to turn to empirical research articles to guide my approach to this experiment. An initial search led me to compile a rudimentary outline of the areas I would need to address in my study, which include language proficiency and its impact on reading ability, and the areas of reading in which experts deem ELLs need the most instruction. My study is unique in that it adds to research conducted in an American high school setting; the overwhelming majority of research I encountered was conducted in either elementary schools or colleges, and a good deal of it took place on foreign soil.

My experience with ELLs inspired me to first look at the students from a holistic viewpoint, in terms of how their backgrounds have affected their language proficiency, and how this in turn may have affected their current reading abilities; I felt that the two must be connected. Through this lens, I discovered research that identified many factors that can influence language proficiency. I compiled the research into the areas that I felt were the most relevant to my group of students: age, first language (L1) proficiency, and socio-economic and -cultural experiences related to immigration.

Regarding age and L1 proficiency, a study by McLaughlin (1984) dispelled my previously-held belief that older language learners do not attain language as quickly as younger language learners, based on three components: older language learners can use their first language to understand a new language, they have more developed cognitive processes, and they have more extensive background knowledge. This knowledge made me hopeful that my students could show improvement within a reasonable amount of time.

On the other hand, the effects of socioeconomic and sociocultural circumstances gave me cause for concern, as I have been told surprising and disheartening stories over the years about the experiences of my ELLs both before and after immigrating. Hakuta, Butler, and Witt (2000) found a correlation between lower socioeconomic status and a slower rate of English language acquisition, while Igoa (1995) found that 75% of her ELL students had experienced gaps in their education due to life situations. For these reasons, I chose to include demographic information about my research students on all of the above in Chapter 3, and to bear it in mind when analyzing the results of my study.

My second instinct was to find out what researchers had to say specifically about instructing ELLs in reading. Through analyzing qualitative, quantitative, conceptual, and mixed research, I discovered that in addition to reading strategies that are recommended for all struggling readers, several recurring themes that applied more strongly to ELLs surfaced. These included the importance of oral language development (Droop & Verhoeven, 2003; Igoa, 1995; Guerrero, 2004; Geva & Farnia, 2012), activating and building background knowledge (Watkins & Lindahl, 2010), vocabulary (Bolos, 2012), and higher-level questioning (Purdy, 2008; Taboada, Bianco, & Bowerman, 2012). Once I had singled out these themes, I was able to delve deeper into each area, using what I learned to shape how I would conduct my research; developing this framework gave me confidence that I was capable of undertaking the challenge presented by my inquiry.

I have always felt that discussion was an important tool in my classroom, but this was based on my own notions of the need for ELLs to develop conversational skills, the fact that my ELLs are often quiet in their mainstream classes, and my desire to include their home cultures; I was unaware of the benefit of discussion in terms of improving reading ability until I uncovered the research in this field. In a study conducted by Geva and Farnia (2012), the authors found that oral language proficiency was a primary indicator of reading fluency, which in turn determined a student's ability to make meaning from a text. Purdy (2008) found that conversation and collaborative talk allowed for activating background knowledge, introducing content area vocabulary, and encouraging higher-order thinking, while also recognizing and building on cultural individuality. Guerrero (2004) and Khisty (1995) maintain that discussion in the content

areas is a valuable tool for ELLs as it helps them better understand difficult concepts. This research led me to believe that I could use discussion as a means of think-aloud to teach my students about the other reading strategies for ELLs (background knowledge, vocabulary, and questioning) that I wanted to include in my experiment.

While information regarding background knowledge appeared to be sprinkled throughout the research I encountered, there were plenty of articles that directly addressed vocabulary instruction for ELLs; these articles tended to focus on the importance of teaching students how to approach content area vocabulary, which matched up beautifully with my line of inquiry. The reason content area vocabulary appears to be such a strong focus in literature is due to what Corson (1997) refers to as its "opaque" nature; Townsend and Collins (2008) define it as "complex and often abstract" (p. 994). However, in reading about recommendations for vocabulary instruction my perspective took a drastic turn. For years, I had been questioning why ELLs were being given texts that were so challenging, assuming that they should be reading easier versions. Yet, an article by Watkins and Lindahl (2010) informed me that ELLs should be exposed to challenging texts, and that by doing so, they are introduced to vocabulary in context. Furthermore, Carlo, August, and Snow (2005) argue that teaching vocabulary in isolation can lead ELLs to misinterpret meanings; instead, they should be taught strategies that encourage them to figure out meanings through context. These findings were incredibly encouraging; not only could I end my internal struggle that ELLs should not be given difficult texts, but I was also being guided to teach my students skills that would allow them to handle these texts on their own. At this point in my research, I was very excited to see what the outcomes of my study would be.

When it came time to read the research I had collected regarding questioning techniques and ELLs, I narrowed it down to two articles that truly embodied where I wanted my inquiry to go, as far as fostering metacognition; this was through the creation of self-generated questions. The first was a study on prior knowledge and self-questioning, written by Taboada and Guthrie in 2006; this study applied to only English speakers, and introduced a four-level questioning hierarchy that connected the sophistication of self-generated questions to reading comprehension. The second study was a kind of sequel to the first, and was written by Taboada, Bianco, and Bowerman in 2012. This study took the information Taboada had helped to disseminate in the first study, and applied it to ELLs, but with two added components: the impact of vocabulary on comprehension, and the inclusion of instruction on creating better questions. The study's positive results informed me that I could teach my students how to create questions that would aid them in comprehension. Not only does this satisfy instructing ELLs in questioning, and confirm that background knowledge and vocabulary are essential, but it also serves to encourage independence, all of which are on target with my inquiry goals.

The final piece I felt I should look into was the idea of cultivating metacognitive awareness of reading strategies in ELLs. The research I found was limited to whether or not bilinguals use metacognitive strategies, and the results were affirmative (Keshavarz & Ghamoushi, 2014; Lin and Yu, 2015). The latter article also concluded that with an increase in proficiency level came an increase in the use of advantageous metacognitive strategies. While these articles confirmed that bilinguals possess metacognitive

awareness, I believe my research will conclude whether or not metacognition can be instigated through instruction.

Statement of Research Problem and Question

The purpose of this study is twofold. Firstly, I intend to introduce ELLs to the strategies good readers use when faced with a particularly challenging text. Secondly, I will observe if the students internalize these strategies and apply them intentionally, or metacognitively. To come to satisfactory conclusions regarding these two approaches, a number of questions must be considered: What reading strategies are the students currently using? Which of the strategies introduced help the students the most? Which strategies are easiest for the students to internalize? What is the depth of the students' comprehension after employing the strategies? Can the strategies I teach be used by all levels of English proficiency, or do some work better than others depending on a student's proficiency level?

Story of the Question

When it came time to decide what nagging question I wanted to address in my teacher research, I did not hesitate to settle on examining ways to help my ELLs when it comes to reading challenging texts. In fact, no other questions came to mind with such immediacy and concern. Not only does all of the research cited above stress the imperative need for ELLs to comprehend expository texts, but this has been an all-encompassing issue during my 8 years in the ELL classroom; ELLs who are mainstreamed are daily exposed to difficult texts, across almost all of the content areas. For the most part, the readings tend to come from high school level texts; however, the reading levels of the ELLs I teach range from 1st grade on up, with most of them

hovering in the elementary to middle school range. ELLs must develop skills to handle these texts, or risk being unsuccessful in graduating high school, and being college and career ready. As the ELL teacher at my school, I am tasked with helping my students to succeed. Yet, as previously mentioned, I felt that for too long I had been letting them down.

As can be concluded from my lamentations, my inquiry has been developing over the course of several years. My lack of confidence in this area came from a lack of what I would consider formal training. In college, I majored as a French teacher, then took four additional courses that focused more on sociocultural elements than English instruction in order to receive ELL certification; my intentions in receiving this certification were merely to make myself a more desirable candidate for employment. Therefore, when I was asked to take on the ELL classes three years into my career as a French teacher, I did so without having any training as a teacher of literacy. I relied fully on my own experiences as an avid reader to guide my instruction. My self-professed shortcomings are what prompted me to become a reading specialist.

Prior to the revelations prompted by my literature review, I was quite confident that the fault lay mostly with the content area teachers, and their lack of modifications for ELLs, which are, however vaguely, required by state law. This could be due to several factors, including overloaded schedules, a lack of training in this area, the compulsion to teach to the test, or their confusing conversational language proficiency with academic language proficiency. Every year, I dutifully emailed each of the teachers of ELLs with the students' reading levels and recommendations for making accommodations; I still believe this to be a valid and useful tool. To be fair, several teachers would communicate

with me, asking me for suggestions or keeping me apprised of the students' progress. A few of them have even included culturally inclusive texts in their curriculum. However, the overwhelming majority of the ELLs' workload was comprised of unmodified texts that do not address the backgrounds of ELLs. Despite all of my efforts, I long ago resigned myself to the fact that this was not going to change. However, it was not until I began my teacher research that I realized I may be the one to effect real and lasting change. Should my research provide positive results within a relatively short timeframe, I will be able to use the research to develop long-term plans that could impact all of my students, not just those who participated in the current study.

Organization of the Paper

I have organized the remainder of my paper into four additional chapters. Chapter 2 goes into greater detail about the literature I reviewed that informed my study. Chapter 3 provides details about my district, school, students, and study. Chapter 4 disseminates all of my research findings, revealing important information about the outcome. Finally, Chapter 5 includes limitations and concluding statements about my research.

Chapter 2

Literature Review

To develop academic proficiency in English, Watkins and Lindahl (2010) insist that English Language Learners (ELLs) should be exposed to "the same or similar cognitively demanding texts" (p. 25) as native-English speakers within the content area classroom. They charge content area teachers with providing targeted reading instruction to ELLs; unfortunately, this rarely occurs due to a lack of knowledge, proper training, and resources, or simply a failure to modify tasks. ELLs must be properly instructed in critical reading strategies, and provided with opportunities to foster the development of the aforementioned metacognitive strategies, in order to be successful readers when tackling challenging texts without instructor support.

In the following sections I will review the research that demonstrates that good readers actively engage with a text to make meaning. They approach a text with a purpose, examine textual structures, make connections to and build upon their prior knowledge, take physical or mental notes, construct mental images, re-read, infer information based on textual evidence, adjust reading based on confusions, evaluate, and come to conclusions, all before, during, and after reading (Pressley & Gaskins, 2006). To that end, I will discuss factors that affect the attainment of language proficiency and instructional strategies that are recommended for ELLs, including prior knowledge, discussion, vocabulary, and questioning. Content area texts provide a challenging task for high school students and require these skills to elicit proper understanding. Learners who are still developing language proficiency find themselves in a unique and difficult position.

Factors Contributing to Language Proficiency

To truly grasp the academic challenges presented to English Language Learners, it is important to understand the general timeframes of language acquisition, and what factors influence individual language proficiency. In 2000, Hakuta, Butler, and Witt compiled findings on language development from four different school districts in the United States and Canada, comprised of close to 3,500 ELL students. They concluded that it takes approximately 3 to 5 years to develop oral, conversational proficiency, and 4 to 7 years to achieve academic proficiency, or the language required to succeed on standardized test. These proficiency ranges allow for a number of circumstances that can contribute to individual ability in attaining both oral and academic proficiency.

One circumstance to be considered is age. Contrary to popular belief, McLaughlin (1984) determined that adolescent and adult language learners can develop proficiency more readily than younger language learners. He based his claims on three components concerning older language learners: they have a more developed first language and can use this to understand a new language, they have more developed cognitive processes, and they have more extensive background knowledge. The first point appears to be based on Cummins' (1979) developmental interdependence hypothesis, in which "the development of competence in a second language (L2) is partially a function of the type of competence already developed in the first language (Ll) at the time when intensive exposure to L2 begins" (p. 3). García and Leiva (2014) refer to the resourceful use of L1 and L2 interchangeably to make meaning as *translanguaging*. Accordingly, older high school ELLs should have an advantage in terms of acquiring academic language

proficiency, but only if their previous education in their native language was comprehensive and not stilted, which is not always the case.

Another factor to consider is the linguistic and orthographic natures of the first and second languages. In one study, Odlin (1989) found that native English adults achieved oral proficiency in Spanish at about half the rate that they achieved the same proficiency in Russian. Akamatsu (1999) used visual distortion, or case alteration, to study the decoding abilities of ELLs whose native languages were either alphabetic or non-alphabetic. He found that the ELLs whose native languages were alphabetic (Iranians and Persians) were better able to identify the altered English words than ELLs whose native languages were non-alphabetic (Chinese and Japanese). These findings suggest that, in terms of the current study, the Spanish- and Filipino-speaking ELLs would have greater ease in developing oral and written proficiency than the Gujarati-speaking ELLs.

In addition to age and language relatedness, socioeconomic status and the sociocultural aspects of being an immigrant can affect L2 proficiency. Hakuta, Butler, and Witt (2000) found that "students from lower socioeconomic status are the ones who on average are learning English more slowly" (p. 14). The results of a study of reading comprehension abilities in Dutch, Moroccan, and Turkish students in the Netherlands consistently revealed that the minority students scored lower than the Dutch students, and "the majority of minority children in the Netherlands originate from poor families with limited literacy experiences" (Droop & Verhoeven, 2003, p. 82). Igoa (1995), a teacher-researcher, defines immigrant children as "children who have been uprooted from their own cultural environment and need to be guided not to fling themselves overboard in their encounter with a new culture… [and] language" (p. 9). She explains how 75% of the

immigrant students she worked with experienced gaps in their education due to war, family obligations, or other circumstances beyond their control. Igoa describes how many of these students go through a silent phase, which in turn affects their oral language development. Therefore, the personal background of an ELL student can have an impact on the rate at which they are capable of attaining language.

Based on this research, ELLs attain proficiency at varying levels due to age differences, the nature of and the proficiency level of their L1, their previous education or lack thereof, and socio-economic/cultural experiences related to immigration. These factors contribute to the challenges faced by ELLs when tackling content area texts.

Instructing ELLs in Reading

Several recurring themes emerged in the research literature surrounding the recommended instruction of English Language Learners that can be applied specifically to the comprehension of content area texts. Firstly, oral language development is paramount, specifically in terms of improving reading comprehension (Droop & Verhoeven, 2003; Igoa, 1995; Guerrero, 2004; Geva & Farnia, 2012). Secondly, activating and building background knowledge (Watkins & Lindahl, 2010) as well as clarifying vocabulary (Bolos, 2012) are considered to be valuable components. Lastly, questioning techniques that encourage deeper thinking and metacognition are beneficial in helping ELLs to construct meaning (Purdy, 2008; Taboada, Bianco, & Bowerman, 2012). For the purposes of the current study, all of these instructional strategies will be examined, with an overarching goal of encouraging metacognitive awareness throughout the reading process.

Background knowledge and student talk. Geva and Farnia (2012), who conducted a longitudinal quantitative study that followed both ELL and English speaking (EL1) students from 1st grade up through 6th grade, discovered that oral language proficiency plays an important role in reading comprehension for ELLs. The purpose of their study was to identify and compare the factors that contribute to reading comprehension primarily in grade 2, and again in grade 5. At grade 2, the strongest predictors of reading comprehension were vocabulary and phonological awareness. However, at grade 5, the strongest predictors of reading comprehension included cognitive ability, word identification, syntax, listening comprehension, and text reading fluency; Geva and Farnia listed syntax and listening comprehension as the measures for oral language proficiency. They believe that the heightened oral skills at the 5th grade level accounted for greater reading fluency, which allowed for meaning-making while reading. These findings can be connected to the importance of promoting academic discourse, as seen in the studies that follow.

Purdy (2008) based a qualitative study of the reading comprehension of elementary ELLs on the theories of Vygotsky, who believed that in order to obtain the highest level of cognitive functioning, students should be engaged in social interaction. With this view in mind, Purdy observed and interviewed three ELL children. Her observations centered on the interactions that took place during teacher-led conversations about books. She felt that ELLs are at a disadvantage in meeting today's critical literacy requirements and are not always given ample opportunity to practice their oral skills, stating "not only do [ELLs] lack the background knowledge or vocabulary necessary to understand content, they must be given opportunities to engage in critical discourse about

texts" (p. 44). Purdy found that the ELL students spoke the most when they were nudged by the teacher to explain their answers. They also became more expressive when the conversations became student-led, with minimal teacher facilitation. Purdy believes "students should be the agents: teachers need to step back, letting the children shape the topic of conversation" (p. 49). She concluded that "conversations around texts during reading activities can shape and extend the construction of meaning for the benefit of all, but especially for ELL students" (p. 44). Furthermore, Purdy expressed concern that ELLs are reluctant to participate in discussion if their home culture is not recognized, and that teachers should be culturally sensitive and inclusive.

Similarly, McElvain's (2010) study of transactional literature circles demonstrates how Purdy's (2008) recommendations can be observed through the use of Instructional Conversations, first introduced by Goldenberg in 1992. Among other features, the eight-step procedure includes activating background knowledge, eliciting more elaborate responses, and encouraging participation, characteristics also mentioned by Purdy. The quantitative results of McElvain's research confirmed that in 7 months students increased an entire grade level in reading.

Conversation should not be limited to the literacy classroom. The importance of conversation for ELLs within the content area classroom has been expressed by multiple researchers (Guerrero, 2004). In terms of mathematics, Khisty (1995) suggests that ELLs need

> ample opportunities to talk about mathematics, to ask questions that test their understandings, to engage in debates about various mathematical processes, and

in general, to participate in the higher cognitive levels of the subject that accompany active dialogue. (p. 290)

The same can be said for all content areas. There exists a necessity for academic discourse within the content areas so that English Language Learners may expand their knowledge of the content while developing more sophisticated reading skills. Through collaborative discussion, ELLs can draw and build upon their experiences, while improving their oral proficiency skills, which in turn affects their reading comprehension.

Vocabulary. As with oral language development, the clarification of unknown vocabulary is another point that appears in virtually all literature related to English Language Learners and reading comprehension (Droop & Verhoeven, 2003; Purdy, 2008). According to Jiménez, García, and Pearson (1996), successful English learners use "a variety of techniques to construct working definitions of unknown vocabulary such as using context, invoking relevant prior knowledge, questioning, inferencing, searching for cognates, and translating" (p. 100). Similar to the processes undertaken by good readers, as described by Pressley and Gaskins (2006), the awareness to apply these vocabulary strategies would be quite natural to a skilled reader. Along with cultivation of overall metacognitive skills for reading comprehension, the vocabulary skills described by Jiménez, García, and Pearson should be of concern in the present study, due to its prevalence in literature.

Townsend and Collins (2008), whose quantitative study addressed the positive effect of vocabulary instruction on middle school English learners vocabulary knowledge, state that "academic vocabulary is one class of vocabulary that poses particular challenges due to its complex and often abstract nature" (p. 994). This is due to

what Corson (1997) refers to in the following quote as the "opaque" nature of English academic vocabulary, which is mostly derived from Graeco-Latin origin. Interestingly, the second point in his statement is reflective of Cummins' (1979) developmental interdependence hypothesis.

> Graeco-Latin words in English tend to be opaque, even for most L1 language users. For ESL users, they tend to be opaque if the learners have had no experience with their etymology when learning English or came from a language background greatly removed structurally from Latin and Greek. These words also have a very low frequency of use in most people's everyday discourse. In summary, the attributes of Graeco-Latin word difficulty are as follows: They are usually non-concrete, low in imagery, low in frequency, and semantically opaque. (p. 696)

While the previous section exposed a need for oral language development to improve reading comprehension, Townsend and Collins claim that "students need to develop knowledge of [academic] words, particularly through print exposure, in order to access academic texts and discourse" (p. 995). This consequently supports Watkins and Lindahl's (2010) charge that teachers should expose English Language Learners to challenging texts. Additionally, Purdy (2008) expressed the following, specifically in regard to vocabulary:

> ELLs learn a word best by trying it out for themselves, explaining its meaning in their own words and connecting it to their own background knowledge. Texts provide rich language and academic vocabulary that ELLs need to be exposed to in order to develop [academic language proficiency]. So teachers should not avoid

texts with difficult vocabulary, but rather encourage students to spend time using new words in different contexts, thus building depth of word meaning as well as vocabulary breadth. (p. 48)

Furthermore, Carlo, August, and Snow (2005) believe that not only does a lack of vocabulary knowledge decrease ELLs ability to analyze a text, it also can lead to misinterpretations of what was read. They assert that direct vocabulary instruction is an impractical solution, claiming

> it is unlikely that interventions that only teach word meanings will close the vocabulary gap between ELLs and their English-speaking peers. Rather, ELLs require interventions that strengthen their ability to apply strategies for independent vocabulary learning as well as provide direct instruction in word meanings. (p. 142)

The positive results of their longitudinal study of fifth grade native Spanish speakers led them to advocate the use of an intervention they call the Vocabulary Improvement Project [VIP], which consists of a curriculum, an instructional routine, and professional development. The instructional routine involves intensive, in-context activities, such as inferring and completing cloze tasks. The results of their study revealed significant gains in both explicitly-taught words, and vocabulary in general, when compared with a control group. This indicates that the subjects were able to use what they were taught in order to decipher the meanings of unknown words.

The literature is quite clear: there is a need for critical and contextual academic language instruction, presumably due to its effect on both language proficiency and reading comprehension. Additionally, long-term instruction, such as that set forth by

Carlo, August, and Snow (2005) can increase the use of metacognitive vocabulary strategies as outlined by Jiménez, García, and Pearson (1996).

Text-based questioning. Looking back at Pressley and Gaskins' (2006) description of what good readers do, it is evident that many of the processes involve questioning, such as examining, connecting, constructing, inferring, adjusting, and evaluating. In 2006, Taboada and Guthrie set out to examine the contribution of self-questioning to reading comprehension in 360 English-speaking 3rd and 4th graders within the content area of science. Their findings would later inform Taboada, Bianco, and Bowerman's (2012) study of self-questioning in English Language Learners. Both studies revealed a positive association between self-questioning and reading comprehension, and support the ideal of fostering metacognition in ELLs.

Taboada and Guthrie (2006) chose to observe the effect of self-questioning on reading comprehension because while there was extensive proof of the positive effects it can have, there were only three explanations for the theory behind these effects: the initiation of active cognitive processes, connection to prior knowledge, and attention to text in order to answer specific questions. However, they felt that there was not enough empirical evidence to support any of these hypotheses. In 2004, using a widely accepted view that comprehension is the creation of a mental representation of the relationships between textual elements (e.g., Trabasso, Secco, & van den Broeck, 1984; van den Broeck & Kremer, 2000), they proposed a fourth hypothesis, the conceptual level hypothesis. Taboada and Guthrie (2006) claimed that self-generated conceptual questions increase comprehension, thereby aiding in the creation of this mental representation of concepts. Depending on the extent of the reader's prior knowledge, the mental structure

they develop will contain more connections. Furthermore, the higher the question level, the more complex the mental structure. In their 2006 study, they applied this hypothesis by categorizing self-generated questions produced by the students while reading expository science texts into 4 levels of increasing sophistication. After reading, they tested the students' comprehension, then compared these results to the question levels initially produced by each student. Their results indicated a correlation between the two; the more sophisticated the questions, the greater the comprehension.

In 2012, Taboada teamed up with Bianco and Bowerman to conduct two studies on the effects of questioning in a 5th grade ELL population; they found that few studies had been conducted on this topic, and that those few focused on questioning in terms of aiding comprehension during confusion, rather than using questioning as a means of deepening conceptual knowledge. The first study used the same method and rubric found in the 2006 study of Taboada and Guthrie, in which the students were asked to generate their own questions; however, an added factor, vocabulary knowledge, was also measured. The results of the comprehension test was compared with both the results of the vocabulary test and the questioning hierarchy. The authors were surprised to find that for ELLs, vocabulary was a stronger predictor of reading comprehension than the levels of self-generated questions. However, they still believed that the use of self-generated questions was of significant importance as a secondary predictor, and set out in their second study to determine if targeted instruction in formulating questions would improve the students' ability to generate quality questions, and if that would in turn affect their reading comprehension. In both instances, the results were positive, regardless of the proficiency levels of the students. The results of these studies clearly indicate that

instruction can be tailored to scaffold students toward developing high-quality questions that will improve their reading comprehension.

Metacognitive awareness. The final consideration relevant to the current study is the presence of metacognitive awareness in ELLs as they read. Recent research is somewhat limited in this area, however, two studies in foreign sites exist that were conducted using college students, one that compared metacognition in bilingual and monolingual students, and another that compared the metacognition of ELLs in their L1 and L2. In the first quantitative study, Keshavarz and Ghamoushi (2014) asked 100 Persian and 100 Azeri-Persian students to take a computer-based assessment that recorded their use of metacognitive strategies while reading. Their results showed that the bilingual students scored higher in their overall use of metacognitive strategies. In the second mixed research study, Lin and Yu (2015) interviewed, observed, and tested 36 Chinese students while reading first in English (L2), then in Chinese (L1). They concluded that the students used more strategies more frequently when reading in their second language than in their first. They also found a correlation between English proficiency level (high, intermediate, and low) and reading ability. The authors determined that the higher the proficiency level, the more sophisticated the metacognitive strategies, while the lower the proficiency level, the more focus there was on strategies to support linguistics. Both studies maintain that metacognitive reading strategies are a valuable tool for ELLs, hence its relevance in the current study.

Conclusion

English Language Learners enter the classroom with varying levels of English proficiency, and through my research I have learned that there are many factors that can

affect the rate at which their proficiency progresses once they are established in the United States. The literature tells us that ELLs learn somewhat differently from their EL1 counterparts, and that they benefit from instruction tailored to their identities and needs. That instruction includes opportunities for higher-level academic discussion, exposure to vocabulary within the context of content area texts, and instruction that promotes the self-generation of higher-level questions. I am not confident that my ELLs will receive that instruction within their content area classes, therefore, I am anxious to discover if the mini-lessons I teach them, based on the above research, will begin to foster metacognitive strategies that they can use when reading challenging content area texts.

Chapter 3

Context of the Study

District and Community

The study site is Absegami High School, one of three high schools that comprise the Greater Egg Harbor Regional High School District [GEHRHSD]. The GEHRHSD provides educational services to students within a 324 square mile radius, making it the largest district within the state of New Jersey. The New Jersey Department of Education has ranked the GEHRHSD as a CD on their District Factor Group scale. There are eight possible ranks on the District Factor Group Scale, with A being the lowest socioeconomic level, and J being the highest; CD denotes the third lowest socioeconomic level. These groups are measured using six criteria: the percent of adults with no high school diploma, the percent of adults with some college education, occupational status, unemployment rate, percent of individuals in poverty, and median family income. The 2010 state census records a combined population of 113,322 within the district, with 39, 961 households, 28, 810 families, and a median household income of $62,369; 31% of the households, or approximately 12,388, contained children under the age of 18. The 2016-17 GEHRHSD school term recorded a total enrollment of 3,185 students, with 1,320 students on free or reduced lunch.

In the last decade, the district has lost close to half of its enrollment due to several factors, including the economic recession and the creation of choice schools within the region; the GEHRHSD must pay the tuition of students who choose to attend these schools. These factors have contributed to damaging budget cuts resulting in a reduction in staff, after school programs, and the summer enrichment program. To

combat this, the district has developed six magnet programs to attract students, and has hired the services of Effective School Solutions, LLC to keep students with behavior and social problems in district, rather than paying for them to attend out of district programs.

School

Absegami High School is located in the suburban community of Galloway Township, 12 miles northwest of Atlantic City. Absegami employs 121 certified professionals, 3% of whom are ethnically diverse. The student to teacher ratio is 11:1. Current student enrollment is approximately 1,350, with a 1:1 ratio of male to female students. Absegami is registered as a Title I school, with 46% of the population eligible for free or reduced lunch. Ethnically, 47.1% of the student population is Caucasian, 18.4% is Hispanic, 17.5% is African American, 15.4% is Asian, and less than 2% is made up of other ethnic minorities. Linguistically, 79.4% of students claim to speak English at home, 7.7% Spanish, 4.2% Gujarati, 1.6% Chinese, 1.2% Vietnamese, and the remaining 6% is grouped as "other". 241 students have IEPs, and 18 students are enrolled in ELL. 51% of students met or exceeded expectations for Language Arts on the 2016 PARCC assessment, while 34% met or exceeded expectations for the Mathematics portion, both percentages falling below the state average. SAT scores exceed state averages. The graduation rate is 92%.

There are four district goals for the present school year, the first of which declares that students will be made college and career ready through varied academic opportunities. There are three objectives within that goal, pertaining to increased success on standardized tests, social and emotional well-being, and the enhancement of lifelong learning skills. To meet these goals, Absegami has undertaken several initiatives. These

include Physics First for ninth graders, a College and Career Readiness course to support students with a history of poor scores on standardized tests, the hiring of Effective School Solutions, LLC, the development of themed programs hosted in the school library, and the creation of several new academic courses, such as Urban Farming, which boasts a hands-on garden, complete with chickens, and the plans to house honeybee hives. There are also several special education pull out and push in options depending on individual needs, along with the Realizing Educational and Career Hopes [REACH] program, which teaches life skills to cognitively impaired students. In terms of literacy, 9th and 10th graders must still take English I and English II (standard, honors, or advanced placement). However, 11th and 12th graders can choose from several new literature courses, such as Contemporary Literature, English Language and Composition, Literature and Cinema, and British Literature, based on their likes and needs. The school continues to provide ELL services, an ELL Lab for tutoring, and Reading for ELL, available for all four years if necessary.

Classroom

During the 2017-2018 school year, I taught three levels of French and four levels of ELL. Staffing restraints require that all four levels of ELL instruction take place during two class periods, resulting in a combined ELL 1/2 course for beginners, and a combined ELL 3/4 course for intermediate to advanced students. I chose to conduct the current study during the English Language Learners 3/4 class, due to the variety of grade levels, language proficiencies, and the small class size. There are currently 12 students in ELL 1/2 and 6 students in ELL 3/4; however, these numbers change regularly. The classroom itself, illustrated in Figure 1, is of average size and is divided into three physical spaces,

with regular desks facing a white board, a computer lab of five desktop computers facing a wall, and a cluster of more comfortable, wheeled desks arranged on a carpeted area at the back of the room.

Figure 1. Layout of the Study Site Classroom, Absegami High School, Galloway, NJ. November, 13, 2017.

A large cabinet houses leveled independent reading books, and bookshelf contains content area textbooks. There is also a cart containing 8 iPads and a printer. There are no windows, so the room is livened up with artificial plants, student artwork, and a mock-window print that looks out on a landscape of Paris. A map of the world adorns the wall opposite the computers, with location icons depicting the countries of origin of each of the students.

When ELL students enter the country or district, I assess them using the WIDA Screener to determine their language proficiency level, then place them accordingly. The entire class is based on a rotation of activities, which include whole group instruction,

small group intervention, leveled independent reading, and leveled independent computer literacy software; each student's independent or instructional reading level determines the leveling for the independent activities. Whole group instructional activities also rotate from day to day or week to week in order to keep students engaged and motivated; my current method of whole group instruction involves reading and rereading texts, while encouraging discussion that includes vocabulary in context and requires higher-level thinking. We make connections between texts whenever possible, and consistently draw upon background knowledge. I began developing this style of pedagogy this school year, based on the knowledge I have gained through my master's courses; the results have so far been very positive, as I have seen an increase in deeper thinking and connection-making; the students appear more responsive and seem proud of their participation. I am also better able to meet the needs of each language proficiency level contained within one class, depending on how I address each student.

Teacher Researcher and Students

The school term in which the study took place marked my 11th year as a full-time teacher at Absegami High School. I hold two standard certifications for teaching in a secondary school, one for French, one for ELL; I have taught the former for 11 years, the latter for 8 years. The current study fulfills my final obligation for a third certification as a reading specialist for grades K through 12. I am trained to administer the state-mandated WIDA ACCESS for ELLs 2.0, an annual online summative assessment that calculates the proficiency levels of each of my ELL students. Additionally, I now assess my ELL students using informal reading inventories introduced to me during my graduate studies; the scores for both of these assessments are identified for each student

in the paragraphs that follow. Furthermore, I continue to incorporate the reading strategies I have learned during my studies into my daily classroom activities, as can be seen in this study.

Lexi is an 18 year old young woman who arrived from El Salvador in 2013. She spent 4 years learning English in her native country. She has been attending school regularly since preschool. Her father completed high school, and her mother was a nurse in El Salvador. She speaks Spanish at home, and claims her parents read to her as a child. She read independently in Spanish while living in El Salvador, and now reads independently in English. She reads at an upper middle school level, and her background knowledge is sometimes limited. Her English proficiency level is a 4.7, on a scale of 1 to 6. Lexi's GPA is an 88.9, which includes grades from when she was enrolled in a bilingual program at her previous district; her grades in the current district are lower, particularly in history and science. There are 7 people living in her household, but she does not receive free or reduced lunch, indicating the household income is greater than $68,709.

David is a 17 year old young man who arrived from Brazil in 2015. He also spent 4 years learning English in his native country. He has been attending school regularly since kindergarten, and both of his parents completed high school. David speaks both Portuguese and English at home. He does not recall being read to as a child, but he remembers reading independently in Portuguese while living in Brazil; he does not currently read independently in English. He reads at a 4th grade level, and needs to work on expanding his vocabulary. His English proficiency level is a 1.9, on a scale of 1 to 6. His GPA is a 77, and he struggles in the core subjects, particularly history. There are 6

people living in his household, but he does not receive free or reduced lunch, indicating the household income is greater than $60,976.

Lucas is a 15 year old young man who lived in the United States until age 5, then moved back to India until age 14. He believes approximately 25% of the school day in India was conducted in English. He has experienced no interruption in schooling since kindergarten, and both of his parents completed some college. He speaks Gujarati with his parents, but English with his brother. He does not remember his parents reading books to him, however, he did read picture books in Gujarati for fun; he now reads independently in English. Lucas reads at a 5th grade level, and needs to work on inferencing. His English proficiency level is a 3.6, on a scale of 1 to 6. His GPA is an 89, with history as his weakest subject. There are 4 people living in his household, but he does not receive free or reduced lunch, indicating the household income is greater than $45, 510.

Piya is a 16 year old young woman who arrived from India in 2016. All of the textbooks in her school in India were in English, and she was expected to write in English, but the spoken language tended to be in Gujarati. She has been attending school regularly since kindergarten, but a lack of transcripts from India forced her to audit her first year in the United States. Her father and mother both received bachelor's degrees. She speaks Gujarati at home, but does not remember being read to. She remembers reading independently in English, Hindi, and Gujarati while in India, and she now borrows books in English to read at home. She reads at a 6th grade level, and needs to work on inferencing. Her English proficiency level is a 4.8, on a scale of 1 to 6. Piya's GPA is a 95, and she appears to do well in all of her classes. There are 5 people living in

her household, but she does not receive free or reduced lunch, indicating the household income is greater than $53,243.

John is a 17 year old young man who arrived from India in 2016. He studied English for 7 years at school in India. He was absent from school for 1 year when his brother was born with a heart condition and the family moved to the seaside; consequently, he had to repeat the 4th grade. His mother completed 10th grade, and his father completed 9th grade. He speaks Gujarati with his parents, and English with his cousin. His mother read to him as a child, but he did not read on his own. John reads at a 5th grade level, and struggles with reading fluency. His English proficiency level is a 3.5, on a scale of 1 to 6. His GPA is an 85, and he struggles in history, math, and science. There are 4 people living in his household, and he receives free lunch, which indicates his household income is less than $45, 510.

Cody is a 14 year old young man who arrived from the Philippines in January of 2017. He attended a school with a comprehensive English program since kindergarten. He missed one month of school prior to moving to the United States. His mom graduated high school, and his father completed 2 years of college. Cody's family speaks both English and Tagalog at home. He does not recall being read to as a child, but he reads on his own in both English and Tagalog. Cody reads at an upper middle school level, and needs to work on inferencing. His English proficiency level is a 3.7, on a scale of 1 to 6. His lowest grade is an 86 in history. There are 4 people living in his household, and he receives free lunch, which indicates his household income is less than $45, 510.

Research Design

The research question "what happens when ELL students apply close reading strategies while reading challenging content area texts?" is best studied using a qualitative approach. In the simplest terms, Denzin and Lincoln (2017) define qualitative research as "an interpretive, naturalistic approach to the world" (p. 10). To that end, qualitative research tends to be a holistic field study, in which an investigator collects data pertinent to a personal inquiry through methods such as observations, interviews, and artifacts, that can then be interpreted for meaning (Denzin & Lincoln, 2017; Cochran-Smith & Lytle, 2009).

To add to this concept, the current study takes place in the form of teacher research, also known as teacher inquiry, a unique genre of qualitative research in which the investigator is not an outside observer, but an active participant. In short, the process of teacher inquiry is as follows: a teacher identifies a nagging question specific to their students, gathers multiple sources of data related to that question, then analyzes the data for emerging patterns in the hopes of making changes to improve the educational experiences of their students (Shagoury & Power, 2012). It is expected that the teacher researcher make reflections throughout the process, bringing their own evolving perceptions and interpretations into the mix. Findings are usually reported through detailed narration. Teacher research tends to focus on a concern that is particular to the teacher's classroom, and not necessarily education at large; however, there is often an underlying goal of social justice through the improvement of education for those who are marginalized (Cochran-Smith & Lytle, 2009). Teacher research is an ideal research methodology for my study, because it allows me to answer a question that is specific to

the needs of my minority students, and I am able to interact with them throughout the process in order to procure results that are both relevant and meaningful to everyone involved.

Procedure and Data Collection Methods

In keeping with the paradigm of qualitative teacher research, my inquiry evolved from the desire to address an inequity faced by my ELLs when reading grade-level texts. The study took place during my regularly-scheduled ELL 3/4 class, providing a familiar environment for the six students on the roster, who all readily agreed to participate in the study. In order to create a holistic context, I spoke with each student individually to gather the demographic information found above. Interviews were a cornerstone to my research; I initially determined the students' pre-study behaviors by asking what they did before, during, and after reading a text. These questions were revisited in greater detail as the study progressed. Using the information gleaned from the articles included in Chapter 2, I chose to conduct before-reading mini-lessons concerning background knowledge, vocabulary in context, and generating self-questions. During reading, the students were guided to apply the strategies, and I observed them as I slowly removed the scaffolding. Throughout the process, I encouraged the students to openly discuss their thoughts, both in relation to the specific skills they were employing, and the overall experience. I, too, recorded what I observed, writing from the dual perspectives of both teacher and researcher.

Sources of Data

As qualitative research tends to be subjective, it was important for me to draw data from multiple sources to provide for a trustworthy interpretation; most of this data

was voice recorded. For demographic information, I accessed the students' online records, and interviewed them individually to fill any gaps. As the study focused on scaffolding the students toward metacognition when applying close reading strategies, observation, discussion, and interviews were essential tools. I interviewed the students to determine their self-proclaimed close reading behaviors before, during, and at the close of the study. I prompted peer discussion before, during, and after reading. I observed and recorded what skills I perceived being used in individual student charts. I also collected artifacts, including copies of completed articles that may or may not have contained annotations, and student self-generated questions. Finally, I relied heavily on my own observations, reflections, and interpretations in the form of a research journal. The collection of multiple data points provided me with ample evidence of student behavior while reading, allowing for an informative and trustworthy interpretation.

Data Analysis

I analyzed the above data for patterns that indicated which close reading strategies the students applied. The interviews and discussions provided me with the students' personal beliefs about what they were doing before, during, and after reading a text. I also used these sources to make my own determinations, in the event that they students did not recognize the skills they were utilizing. Additionally, my observation notes and charts allowed me to compare what I was seeing against what the students had shared. The artifacts I collected served to corroborate the above findings, as well as indicate to what degree the skills were being used. Careful analysis of each of these sources, both individually, and in relation to each other, provided reliable evidence to support my interpretations of the data (Guion, 2002).

Chapter 4

Introduction

As discussed in Chapter 1, deciding upon a research question was a task that required very little effort on my part. Discovering the outcome to that question, however, was quite a different matter. I conducted my study over the course of five weeks, knowing that the information I gathered needed to be analyzed from multiple angles, in terms of both my literature review, and the burning questions I had developed. I knew the results would affect the future instruction of all of my ELLs. To summarize, my review of literature resulted in the creation of two main categories concerning reading ability and ELLs, namely, factors contributing to English language proficiency, and reading instruction specific to ELLs. The former was comprised of the subcategories of age, L1 proficiency, and socio-economic/cultural experiences, while the latter included the subcategories of discussion, background knowledge, vocabulary in context, self-generated questions, and metacognition. My personal inquiry questions included: What reading strategies are the students currently using? Which of the strategies introduced help the students the most? Which strategies are easiest for the students to internalize? What is the depth of the students' comprehension after employing the strategies? Can the strategies I teach be used by all levels of English proficiency, or do some work better than others depending on a student's proficiency level?

Finding the answers to these questions required that I devise a holistic study that covered all of the strategies good readers use (Pressley & Gaskins, 2006), and measured the success with which my students adopted those strategies. I used the literature review as a guide when looking at the participants' personal demographic information relating to

age, L1 proficiency, and their social experiences. The literature review also helped direct me to use modeled think-alouds as a means of demonstrating what good readers do before, during, and after reading; I referred to these think-alouds as my mini-lessons, and they were more concentrated at the onset of the study, then tapered off as the students began working independently. I was able to measure the students' progression using interviews, observations, and self-assessments. The idea of metacognition was dependent upon the students having ample opportunity to use the strategies on their own; due to the intangible nature of this skill, interview question #8, as seen in Appendix A, was the main source of data concerning metacognition. Finally, I modeled how to create self-generated questions in the final week of the study using Appendix C, and the students were pushed to create their own questions independently. I also used Appendix C as a rubric to measure the students' success at comprehending what they had read.

Due to the complex framework of the study, I was able to draw several conclusions concerning demographics and English proficiency, the relevance of discussion, the quantity and quality of the strategies used, the incitement of metacognition, and the sophistication of self-generated questions. I was then able to reference this data when answering my inquiry questions, which would determine if I should continue to pursue this method of instruction.

Demographics and English Proficiency

The wide array of information I needed to analyze and disseminate warranted the creation of Table 1; I chose to include demographic information I felt was reflective of the conclusions drawn from the first portion of my literature review. I then compared this

information against itself, and against the number of strategies the students confessed to using as they progressed through independent reading of six articles.

Table 1

Comparison of Participant Demographics and Strategy Use

					Number of Strategies Used		
Participant	Age	EP	Reading Level	Free Lunch	Article 1	Article 3	Article 6
Lexi	18	4.7	7-8th	No	8	9	12
David	17	1.9	4th	No	6	9	12
Lucas	15	3.6	5th	No	8	9	12
Piya	16	4.8	6th	No	5	12	12
John	17	3.5	5th	Yes	6	12	12
Cody	14	3.7	7-8th	Yes	8	12	12

Note. EP = English proficiency level. EP measured using the WIDA ACCESS for ELLs 2.0, on a scale of 1 to 6, with 6 being the highest level of English proficiency. Reading Level measured using the Qualitative Reading Inventory (Leslie & Schudt Caldwell, 2017).

The first observation I made was that age and years spent studying a language was not an immediate indication of English proficiency level, as David had the lowest level of English proficiency, yet was the second oldest of the participants; like Lexi, he claimed to have had four years of English instruction. Looking back at the profiles of the students in Chapter 3, it is more likely that the intensity of English instruction, and not necessarily the years spent studying English in a native country, is the stronger indicator of English proficiency; Lexi, Piya, and Cody all admitted to participating in the most intensive

English instructional programs prior to emigrating. Additionally, the information I gathered supports McLaughlin's (1984) claim that adolescents and adults learn language more readily than children; Lexi and Cody tested on the same reading level, however, Cody had been studying English since kindergarten, whereas Lexi began her instruction at age 12. Meanwhile, John is older than Piya, yet scored lower; however, he had admitted to missing a year of school. John's scores are more similar to Lucas, who is two years younger.

In terms of socioeconomic level, I found no discernible correlation between this and English proficiency level. Cody and John both received free lunch, yet neither had the lowest level of English proficiency. When comparing my study to those conducted in my literature review (Hakuta, Butler, & Witt, 2000; Droop & Verhoeven, 2003), I decided that this phenomenon must be based on percentages, and that my study group was too small to produce an accurate representation of the correlation between lower socioeconomic status and lower English proficiency. Fortunately, my study does demonstrate that individuals should not be judged outright by their socioeconomic status, as this does not preclude their ability to learn English. To confirm this, two out of the three students who showed the greatest increase in strategy use between the first article and the third article were of a lower socioeconomic status.

As a final note, all students, despite age, English proficiency level, reading level, or socioeconomic status, increased their strategy usage between the first and final article. The sophistication of their usage will be further examined below when considering the adoption of reading strategies.

The Benefits of Discussion

I included discussion in my study as it provided an opportunity for students to help each other develop and build onto background knowledge, while exposing them to critical vocabulary in context (Purdy, 2008; Guerrero, 2004). It also allowed them to demonstrate their own think-alouds to each other.

During one of my mini-lessons, John asked what would have happened if William Bradford had not written his chronicle *Of Plymouth Plantation* (2012). I explained that we would not know in detail what had occurred, and that as a result the Thanksgiving holiday might not have existed. John went further, by asking if people ever write down the wrong history. This led us into a discussion about different points of view, and how we can tell what is true or false. When asked how we would be able to tell if history is wrong, John suggested that we could look at the histories recorded by different groups of people; he said that in this example, we could "look at what the Americans wrote down then look at what the Native Americans wrote down," and compare the two. I asked what we would do if the Native Americans did not record their history, and David responded that we could find out if any of the Pilgrims, besides Bradford, had written anything, like letters home. Piya said that maybe someone from outside had visited and wrote a diary. I segued the conversation into a discussion of author bias, and how good readers should always question the validity of what they are reading; I informed the students that they were "evaluating" the text.

A discussion on figuring out vocabulary in context also took place during our think-aloud of Bradford's chronicle, when we first encountered the title *Exploration and the Early Settlers*:

Lexi: "What does *settlers* mean?"
Teacher: "*Settlers*, ok, so let's talk about figuring out vocabulary in context. So, if Lexi doesn't know what a *settler* is, what she could do is read the sentence. We do know *exploration* and *early*. What do people do when they explore?"
John: "Settle."
Teacher: "Well, wait, what do they do when they explore?"
Piya: "Search."
Teacher: "Search for what?"
Cody: "Mysteries."
Piya: "New things."
Teacher: "New things. So, if people are exploring, why might they be exploring? They're looking for new things, why? And maybe not new things, but new what?"
John: "Food."
Teacher: "But where does food come from?"
Cody: "Resources."
David: "The planting."
Piya: "The land."
Teacher: "Land. For new land? Ok, so think of exploration and the early settlers. So, if I'm looking for new land, what am I going to do?"
David: "You're going to explore and settle there."
Lexi: "Live there."

Lexi later admitted that she would not have been able to figure this word out on her own, but that the conversation showed her how to slow down and think about the words more. Cody also inferred the meaning of the word *mutual*, by using the context of the paragraph and connecting it to his knowledge of *mutual friends* on Facebook. When he shared this, all of the students nodded their understanding, and several of them shouted out the words *same* and *similar*.

On another occasion, we used discussion while reading an article titled *Expedition to a Modern Pompeii* (American Museum of Natural History, 2014). When asked who was familiar with the history of Pompeii, only Lexi responded affirmatively, so she shared her knowledge with the other students. As we were reading the article, which mentioned nothing of Pompeii, and only reported on two volcanic eruptions occurring in 1902, Lexi made the connection that the article was titled *Expedition to a Modern*

Pompeii because the author was comparing the two volcanic eruptions in 1902 to what had happened in Pompeii; her observation impressed the other students, who congratulated her on her intuition.

Discussion is clearly an important part of classroom instruction for ELLs. It allows them to learn from each other's background knowledge and come to conclusions about unknown vocabulary, all while building their confidence. When asked if they preferred to work independently or in a group, the students always overwhelmingly responded that they preferred group work.

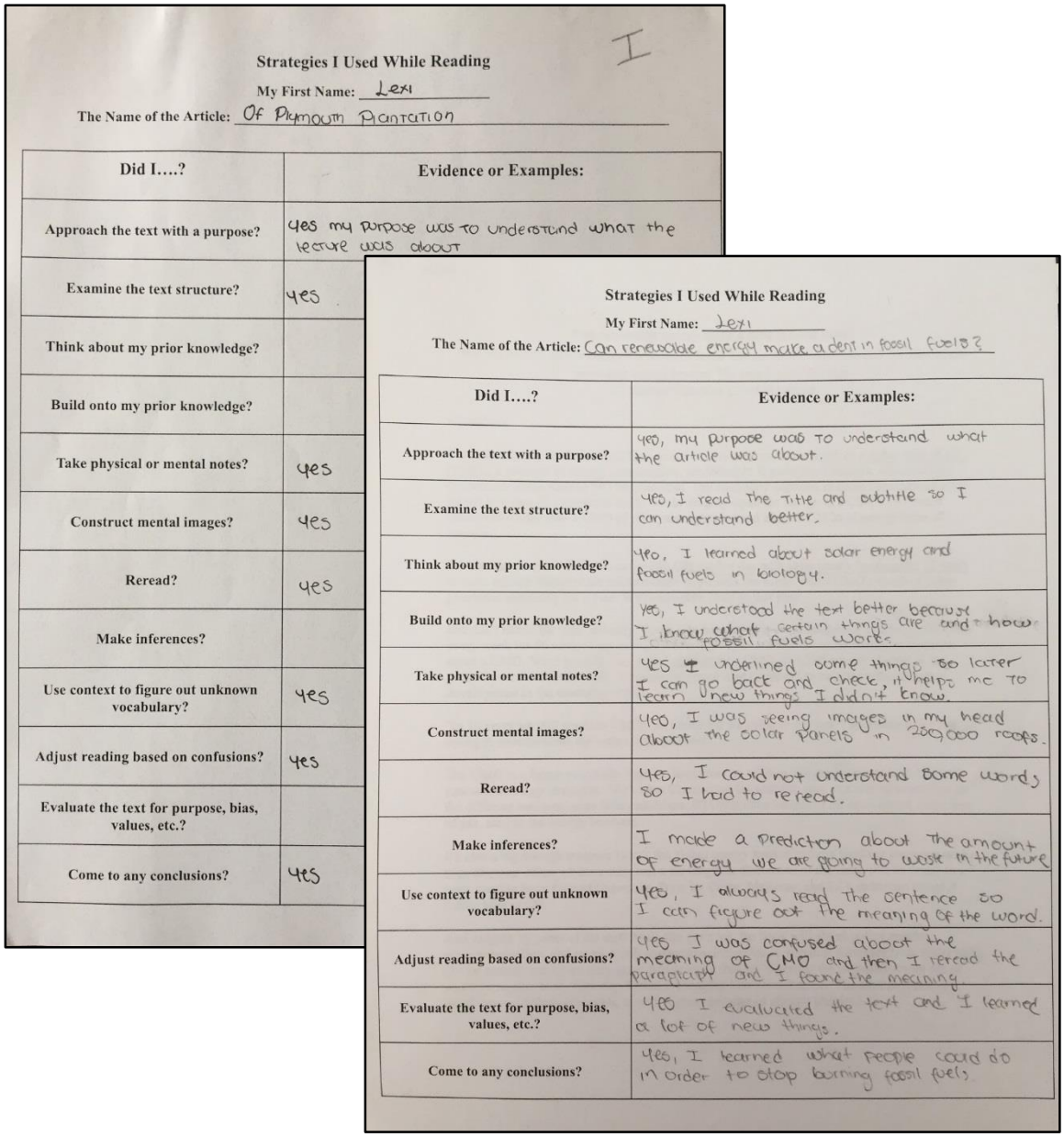
The Adoption of Reading Strategies

Prior to beginning our mini-lessons, I interviewed each student to determine which reading strategies they were already using by asking them what they do before, during, and after reading a text. 1 out of 6 said they read the title, 4 out of 6 said they reread, 1 out of 6 said they underline things, and 1 out of 6 said they think about what they read. Our first modeled think-aloud elicited responses such as "I never read like this before" and "it's slow and a little boring, but it's really good"; all of the students said they saw how it could help them read better.

After the students became familiar with the strategies good readers use, through both modeled think-aloud and discussion, they were ready to attempt to incorporate them on their own. I gave each student a paper titled *Strategies I Used While Reading*, as seen in Figures 2 and 3, to complete as they read each new article. In addition to their self-observed strategy usage, I also interviewed each student about the skills they used while reading a specific article (Figure 4), in order to possibly elicit more information than what they were able to gather on their own. Finally, I conducted two more interviews

about their strategy usage in general (Appendix A), one mid-way through the study, and one at the conclusion of the study. Each new piece of data collected revealed greater usage and understanding of the reading strategies among all of the participants.

Figure 2 shows the succession of Lexi's self-observed strategy usage. The



Strategies I Used While Reading

My First Name: Lexi

The Name of the Article: Of Plymouth Plantation

Did I....?	Evidence or Examples:
Approach the text with a purpose?	yes my purpose was to understand what the lecture was about
Examine the text structure?	yes
Think about my prior knowledge?	
Build onto my prior knowledge?	
Take physical or mental notes?	yes
Construct mental images?	yes
Reread?	yes
Make inferences?	
Use context to figure out unknown vocabulary?	yes
Adjust reading based on confusions?	yes
Evaluate the text for purpose, bias, values, etc.?	
Come to any conclusions?	yes

Strategies I Used While Reading

My First Name: Lexi

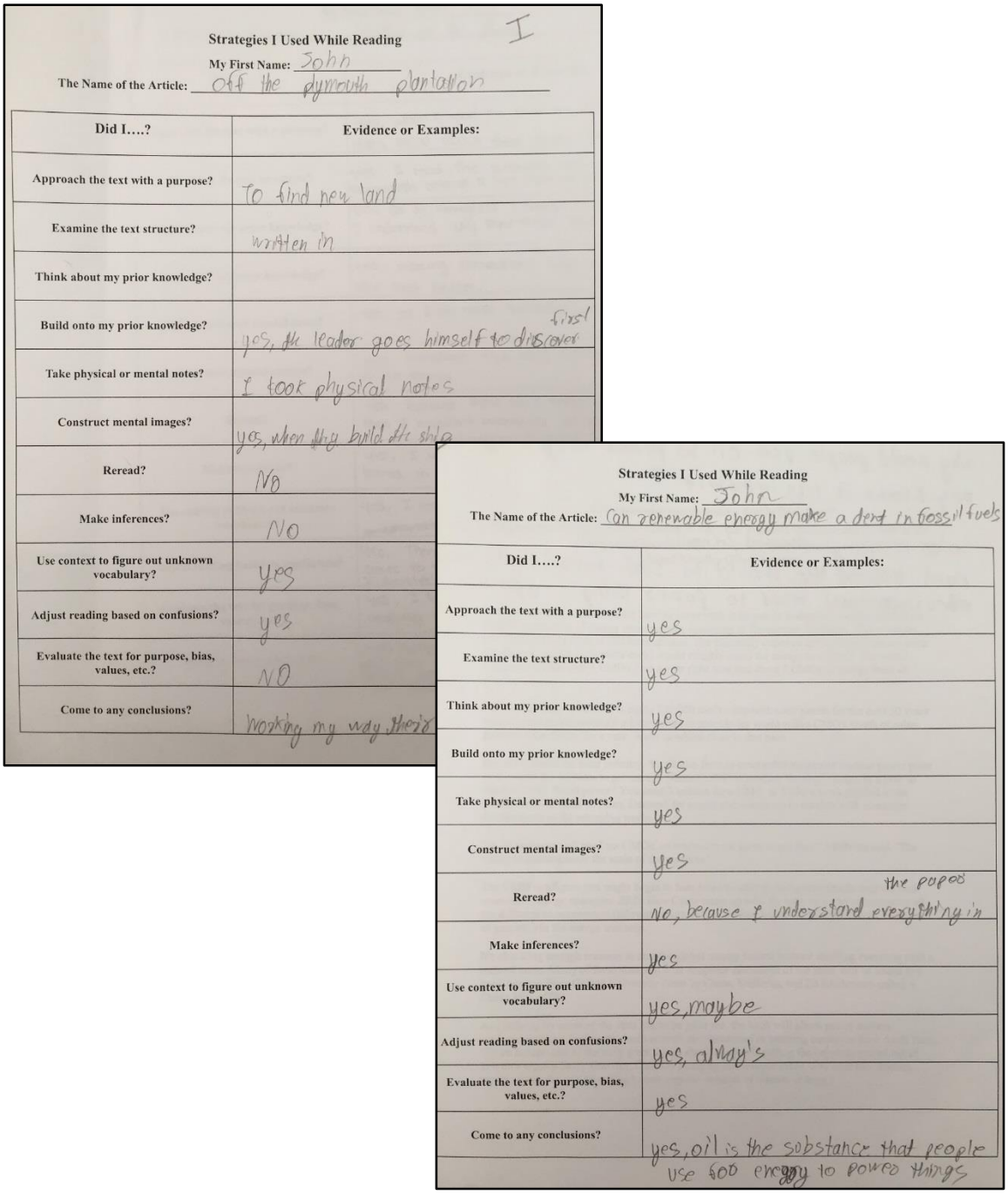
The Name of the Article: Can renewable energy make a dent in fossil fuels?

Did I....?	Evidence or Examples:
Approach the text with a purpose?	yes, my purpose was to understand what the article was about.
Examine the text structure?	yes, I read the title and subtitle so I can understand better.
Think about my prior knowledge?	yes, I learned about solar energy and fossil fuels in biology.
Build onto my prior knowledge?	yes, I understood the text better because I know what certain things are and how fossil fuels works
Take physical or mental notes?	yes I underlined some things so later I can go back and check, it helps me to learn new things I didn't know.
Construct mental images?	yes, I was seeing images in my head about the solar panels in 250,000 roofs.
Reread?	yes, I could not understand some words so I had to reread.
Make inferences?	I made a prediction about the amount of energy we are going to waste in the future
Use context to figure out unknown vocabulary?	yes, I always read the sentence so I can figure out the meaning of the word.
Adjust reading based on confusions?	yes I was confused about the meaning of CMO and then I reread the paragraph and I found the meaning.
Evaluate the text for purpose, bias, values, etc.?	yes I evaluated the text and I learned a lot of new things.
Come to any conclusions?	yes, I learned what people could do in order to stop burning fossil fuels

Figure 2. Lexi's Self-Observed Strategy Usage for Articles 1 and 6.

students read a total of 6 authentic articles donated by content area teachers during the course of the study. Figure 2 includes Lexi's responses to articles 1 and 6. It is clear at a glance that her skill usage increased, along with her ability to show evidence of the skills she used; this demonstrates that her understanding of each skill increased with practice. The responses made by David, Piya, and Cody were very similar to those of Lexi by the time they reached their 6th article, with Piya and Cody giving more detailed evidence than David.

Figure 3, on the other hand, shows the same self-observed strategies as completed by John. I noticed that John's responses, as well as those of Lucas, were less cultivated than the responses of the other participants. In order to be certain of the results, I turned to the interviews I conducted with each student about their skill usage for each article, to compare the responses on their handouts to the responses they gave me verbally. As seen in Figure 4, all of the students had responded affirmatively to all of the strategies when interviewed one-on-one about the 6th article read. After comparing the results, I concluded that the discrepancy in the self-observed strategy handouts was caused by two factors, one being that John and Lucas had less skill in recognizing which strategies they were using, and the other being a lack of effort in completing the handouts; John and Lucas were often the first to turn in their work. To further confirm these findings, I looked to the final one-on-one interviews I conducted concerning the students' strategy usage in general. John's responses, as shown in Appendix B, substantiated my conclusions. For example, he stated that he gets familiar with text structures, thinks about his prior knowledge, underlines what he does not know, visualizes, makes inferences, and rereads. He responded without his self-observed strategy usage handout. This clearly



Strategies I Used While Reading

My First Name: John

The Name of the Article: off the plymouth plantation

Did I....?	Evidence or Examples:
Approach the text with a purpose?	to find new land
Examine the text structure?	written in
Think about my prior knowledge?	
Build onto my prior knowledge?	yes, the leader goes himself to discover first
Take physical or mental notes?	I took physical notes
Construct mental images?	yes, when they build the ship
Reread?	No
Make inferences?	No
Use context to figure out unknown vocabulary?	yes
Adjust reading based on confusions?	yes
Evaluate the text for purpose, bias, values, etc.?	NO
Come to any conclusions?	making my way there

Strategies I Used While Reading

My First Name: John

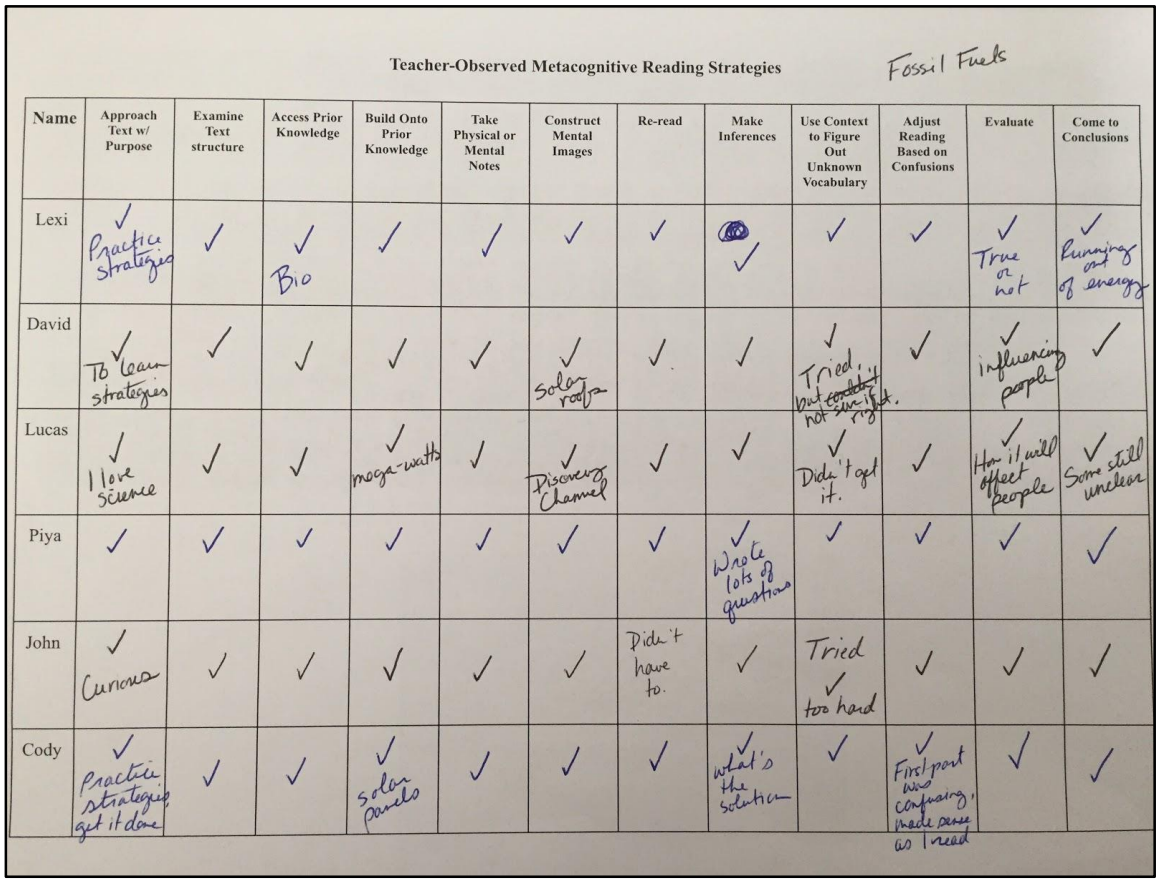
The Name of the Article: Can renewable energy make a dent in fossil fuels

Did I....?	Evidence or Examples:
Approach the text with a purpose?	yes
Examine the text structure?	yes
Think about my prior knowledge?	yes
Build onto my prior knowledge?	yes
Take physical or mental notes?	yes
Construct mental images?	yes
Reread?	the paper no, because I understand everything in
Make inferences?	yes
Use context to figure out unknown vocabulary?	yes, maybe
Adjust reading based on confusions?	yes, always
Evaluate the text for purpose, bias, values, etc.?	yes
Come to any conclusions?	yes, oil is the substance that people use for energy to power things

Figure 3. John's Self-Observed Strategy Usage for Articles 1 and 6.

demonstrates that he uses multiple strategies, and understands why he is using them. The same was true for Lucas, who listed making predictions, accessing background

knowledge, making inferences, using context to figure out vocabulary words, and rereading during his final interview.



Teacher-Observed Metacognitive Reading Strategies — Fossil Fuels

Name	Approach Text w/ Purpose	Examine Text structure	Access Prior Knowledge	Build Onto Prior Knowledge	Take Physical or Mental Notes	Construct Mental Images	Re-read	Make Inferences	Use Context to Figure Out Unknown Vocabulary	Adjust Reading Based on Confusions	Evaluate	Come to Conclusions
Lexi	✓ Practice strategies	✓	✓ Bio	✓	✓	✓	✓	✓	✓	✓	✓ True or not	✓ Running out of energy
David	✓ To learn strategies	✓	✓	✓	✓	✓ solar roofs	✓	✓	✓ Tried, but couldn't not use right.	✓	✓ influencing people	✓
Lucas	✓ I love science	✓	✓	✓ mega-watts	✓	✓ Discovery Channel	✓	✓	✓ Didn't get it.	✓	✓ How it will affect people	✓ Some still unclear
Piya	✓	✓	✓	✓	✓	✓	✓	✓ Wrote lots of questions	✓	✓	✓	✓
John	✓ Curious	✓	✓	✓	✓	✓	Didn't have to.	✓	Tried ✓ too hard	✓	✓	✓
Cody	✓ Practice strategies get it done	✓	✓	✓ solar panels	✓	✓	✓	✓ what's the solution	✓	✓ First part was confusing, made sense as I read	✓	✓

Figure 4. Teacher-Observed Reading Strategies for Article 6.

After comparing the results, I concluded that the discrepancy in the self-observed strategy handouts was caused by two factors, one being that John and Lucas had less skill in recognizing which strategies they were using, and the other being a lack of effort in completing the handouts; John and Lucas were often the first to turn in their work. To further confirm these findings, I looked to the final one-on-one interviews I conducted concerning the students' strategy usage in general. John's responses, as shown in

Appendix B, substantiated my conclusions. For example, he stated that he gets familiar with text structures, thinks about his prior knowledge, underlines what he does not know, visualizes, makes inferences, and rereads. He responded without his self-observed strategy usage handout. This clearly demonstrates that he uses multiple strategies, and understands why he is using them. The same was true for Lucas, who listed making predictions, accessing background knowledge, making inferences, using context to figure out vocabulary words, and rereading during his final interview.

As a whole, all 6 participants showed an increase in strategy usage from the onset of the study. Additionally, an examination of multiple pieces of data demonstrated that all of the students developed a greater understanding of when to use the strategies, and why. Furthermore, due to my decision to focus on background knowledge and vocabulary in context, I noticed that these were the skills the students adopted the quickest, and had the most ease in recalling when completing their self-observed strategy handouts, and when interviewed.

Metacognition

The development of metacognition proved more difficult to verify than the rest of the reading strategies, as I had only the students' opinions as evidence of this trait. I relied on question #8 from their one-on-one interviews (Appendix B), which asks "How natural do the strategies feel when you use them?" to come to my conclusions. The second one-one-one interview, which took place after the students had read their 3rd article, resulted in only one positive response from Piya, who stated "I just did them without thinking". John said, "Underlining feels natural". The remaining students

claimed that they still had to "work hard to remember them", "think about them", or that the strategies were "not natural, yet."

By the final interview, however, the responses to question #8 were more positive. Lexi stated, "Sometimes I think about it, but it's becoming easier." David responded, "Some come naturally, others I have to practice more." Lucas answered at length stating, "I use them now without realizing it. I never used them before, I just read and didn't understand, but now I use them like I know them." Piya affirmed, "Yes, [the strategies] are easier to remember and use. I use them without realizing I'm trying to use them." John said, "I didn't have to think about it." Cody responded, "Sometimes I think about it, rereading I just do, and visualizing." These responses, coupled with the students' increase in strategy understanding and usage, convinced me that after five weeks of practice, all of the students were beginning to internalize at least some of the new strategies they had learned.

Self-Generated Questions

Measuring the students' ability to create questions that demonstrated their comprehension of an article was another area that required close examination. I used the *Questioning Rubric for Information Text* (Taboada, Bianco, & Bowerman, 2012) found in Appendix C to model to the students how to develop questions that required both prior knowledge and new knowledge about a concept. After modeling, the students and I worked together to create questions. Finally, the students were asked to independently create at least two questions each for the final two articles they read as part of the study. They used the rubric for support when creating their questions.

To draw my conclusions, I selected the strongest question that each student had developed for the final article they read, *Can Renewable Energy Make a Dent in Fossil Fuels?* (Kanellos, 2008). The results proved to be split. Lexi, David, and John developed higher-order Level 3 and 4 questions, such as "Do you think the population of the U.S.A. would agree to adding solar panels to 250,000 roofs a day over the next 50 years, and what might be the outcome?" and "Should solar companies put more solar plants around the world to save fossil fuels? Why or why not?" Lucas, Piya, and Cody developed lower-order Level 1 and 2 questions, such as "How much is a megawatt?" and "What is tar sand?" When I compared these results to the students' reading levels (Table 1), and their reading strategy usage for the article, it is evident that this process was not immediately reflective of their reading comprehension. I am not dismissive of this skill, as there is ample literature to support its validity (Taboada & Guthrie, 2006; Taboada, Bianco, & Bowerman, 2012); therefore, it is more likely that developing the ability to create sophisticated questions reflective of reading comprehension required more thorough and long-term instruction than was possible in this study.

Responses to Inquiry Questions

My final consideration was to look back at the data I had analyzed and formulate responses to the five questions I had contemplated during the initial stages of my inquiry; I believed the responses to these questions would help guide future instruction within my ELL classes.

The first question, which asked which reading strategies the students were using at the onset of the study, was answered during my initial interviews. Responses included reading the title, rereading, underlining, and thinking about what they read. After our

initial think-aloud mini-lesson, the students had responded that they had never read closely before. Therefore, I can conclude that most ELL students possess few close reading skills, and are not familiar with the concept of close reading.

The second question asked which strategy helped students the most. In looking at their responses to question #7 during one-on-one interviews (Appendix A), popular answers included thinking about background knowledge, figuring out vocabulary in context, predicting, and slowing down when confused. Both background knowledge and vocabulary in context were part of the recommended instruction for ELLs (McLaughlin, 1984; Hakuta, Butler, & Witt, 2000; Townsend & Collins, 2008; Watkins & Lindahl, 2010; Purdy, 2008; Carlo, August, & Snow, 2005), therefore, the students' responses validated this recommendation. Additionally, I believe this conclusion also answered the third question, which asked which strategies were easiest for the students to internalize; background knowledge and vocabulary in context came up frequently in discussions, interviews, and on the strategy usage handouts.

The fourth question inquired as to the depth of the students' comprehension. This response is less clear, due to the conclusions I made concerning self-generated questions. However, during the final interviews, the students made comments such as "I understand when I read on my own", "I am more active when I read", "I feel more confident", and "[the strategies] are so useful". They also all stated that they were using the strategies outside of the study, and wanted to continue using them. The students certainly felt that they had better comprehension when reading. When coupled with the ability of 50% of the participants to create questions on Level 3 and 4 of Appendix C, I would posit that

there was an increase in comprehension after employing the strategies, but that the depth of that comprehension was not specifically measurable.

The final question asked whether the strategies could be used with all proficiency levels, or if some worked better than others. In studying the progression of the students' self-observed strategy handouts, it appears that approaching a text with a purpose, making inferences, evaluating, and coming to conclusions took longer for the less-proficient students to grasp. It also took more prompting on my part to elicit responses to these strategies during the one-on-one interviews. I believe these strategies can be attained by all proficiency levels, but that it may require more instruction and practice for the less proficient students to master them.

Chapter 5

Conclusion

When I reflect upon the five-week teacher research experiment in which my students participated, I am satisfied that I am on the right path toward promoting academic equity for my ELLs within their mainstream classrooms. The students' active involvement in acquiring and applying close reading strategies has provided them with a means for successfully navigating difficult and frustrating readings. These newfound skills have also given the students a confidence that I had not previously witnessed.

In regard to the recommended instruction for ELLs, including discussion, background knowledge, vocabulary in context, and self-generated questions, the first three of these skills were easy for the students to adopt, and appear to have improved their comprehension. The skill of self-generating questions was more challenging, but is still worth pursuing, as it requires that the students consider more thoughtfully what they have read. I believe all of these skills can have an impact on ELL educational success, and are worthy of including in the curriculum.

When working with ELL students, I feel it is incumbent upon teachers to take a holistic view of the students, by considering their home culture and previous experiences. By adopting a culturally sensitive perspective, teachers can include discussion topics and articles that are relevant to ELLs, and that provide them an opportunity for greater success within the content area classrooms. Prior knowledge especially is an essential tool for ELLs to utilize when given difficult reading tasks. It is important that these students feel included in the mainstream classroom, so that they have the confidence to actively use skills that are so important to their success.

Limitations

Several limitations must be taken into account when interpreting the findings of this study, the first of which was the levels of proficiency within this grouping. While the students did span the high school range of grades and ages, they were all around a middle school reading level. It would be interesting to see how the study would play out with beginning students who test as low as a first grade reading level.

The second limitation was the timeframe; five weeks was a relatively short time to teach students close reading skills and expect to see some form of metacognition. I believe this is a skill that should be introduced at the beginning of the school year, then practiced frequently throughout the year, and from year to year. A longitudinal study would most likely produce more accurate results. Additionally, a longer timeframe would allow ample opportunity for each student to conduct individual think-alouds that could be studied for signs of metacognition, without the support of a self-observed strategy handout. A longer study would also allow for a balance between group discussions and independent work, and would provide more time for working on self-generated questions.

A third limitation was the lack of culturally relevant articles provided by the content area teachers. Only one of the six articles was relevant to the experiences of immigrant students. Not only were the students better able to draw on their prior knowledge when reading this article, but they also all claimed that they found it to be the most interesting of all of the articles. Their prior knowledge and level of engagement no doubt affected their reading comprehension. While these findings support the use of culturally relevant materials within the content area classrooms, the discrepancy in articles within this study may have affected the results.

A final limitation was the possibility that at the onset of the study, the students may have already been using some of the strategies subconsciously, but were unable to consciously put a name to those strategies during the first interview. While the consecutive interviews revealed that many of the strategies were new, the increase in strategy usage may not have been quite as large.

Implications

Shagoury and Power (2012) describe teacher research as "a natural extension of good teaching" (p. 3), because effective teachers continually observe their students, decide what their students need, then change their pedagogy to fit those needs. Teacher research takes these routine habits, and amplifies them, no doubt creating a lasting effect on the teacher. I began this process as both an experienced teacher and an inexperienced teacher researcher, but by trusting my instinct and following the teacher research framework, I was able to collect valuable information that had been beyond my grasp for many years. This experience has served to convince me of the validity of the genre and process of teacher research, and I will continue to see my classes from this perspective.

An indispensable aspect of my teacher research was reflection. True to Shagoury and Power's (2012) words, I noticed that throughout the process it felt completely natural to pause and consider either the small details, or the big picture. When the time came to interpret my findings, the thoughts I had recorded, whether as annotations on sticky notes, or as lengthy narratives in my teacher research journal, provided a rich resource of information about my students and their experiences. Reflection is a powerful tool that provides insight into both the students and the study being conducted.

A unique characteristic of teacher research is the ability of the researcher to influence their study while it is ongoing. Using observations and reflections, the teacher researcher can adjust their plans to better suit their students and their desired outcome. Looking back at my notes, there are several places where I had changed how I wanted to proceed from session to session, based on student performance, and my own doubts about my original plans. This ability makes teacher researchers active participants, models of flexibility, and agents of change.

Teacher research is a noble method of qualitative research that empowers teachers to create richer and more equitable educational experiences for their students. It requires that teachers commit additional time and energy to their craft than what is already expected of them, but the effect is the creation of positive and effective learning environments for all students. After this experience, I firmly believe that teacher research has had a lasting impact on me, and on the outstanding students who participated in this study.

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Appendix A

Interview Questions

1. Do you do anything before you read a text?

2. Do you do anything while reading a text?

3. Do you do anything after you have read a text?

4. What do you do if you see a word you do not know while reading?

5. What do you do if you are confused about something you read?

6. Have you used any of the strategies we have been working with since the study began? Where?

7. Have any of the strategies you have used helped you in any way?

8. How natural do the strategies feel when you use them?

9. Do you think you would want to continue using these strategies when reading on your own?

Appendix B

John's Responses to Final Interview

Interview Questions **Name:** John

1. Do you do anything before you read a text?
   Get familiar with text structures
   Think about prior knowledge
2. Do you do anything while reading a text?
   Underline what I don't know.
   Visualize. Make inferences.
3. Do you do anything after you have read a text?
   Think about what I read
4. What do you do if you see a word you do not know while reading?
   Re-read. Underline.
5. What do you do if you are confused about something you read?
   Stop, read ahead, look back. There is always a clue after the word. They give synonyms or explanations.
6. Have you used any of the strategies we have been working with since the study began?
   Where? No, we don't get to read. But I read narrative books at home. I reread, visualize, accessed prior knowledge, make predictions.
7. Have any of the strategies you have used helped you in any way?
   Yes, I am more aware as I read, I slow down when I need to.
8. How natural do the strategies feel when you use them?
   I didn't have to think about it.
9. Do you think you would want to continue using these strategies when reading on your own?
   Yes.

Appendix C

Questioning Rubric for Information Text[1]

Level 1: Factual Information

Questions are simple in form and request a simple answer, such as a single fact. Questions refer to relatively trivial, non-defining characteristics of the core concepts defined for the unit.

Examples of Students' Questions

- Commonplace or general features of animals that require factual answers: *How big are bats? How much do bears weigh?*
- Simple classification that only requires either a yes/no or one-word answer: *Are bats mammals? What is the biggest desert? Are there male and female whales?*

Level 2: Simple Description

Questions are a request for a global statement about a core concept identified for the unit. The answer requires an explanation that involves a reference to one of the core concepts. These questions are differentiated from Level 1 because they move away from mere factual details, but focus on an explanation about a core concept.

Examples of Students' Questions

- Usually the question inquires about how and why, so an explanation can be elicited.
  How do animals in the rainforest protect from the rain? How do owls protect themselves from predators? Why do birds migrate? Why do some animals need to hibernate and others don't?

Level 3: Complex Explanation

Questions probe the core concepts by using specific prior knowledge within the question. Questions request a complex explanation by virtue of the specificity of the prior knowledge contained in them. The prior knowledge may be from students' prior experience or text-based knowledge that the student uses to formulate his/her question.

Examples of Students' Questions

- An ecological concept of the animal interacting with the environment. The question probes into a specific concept by showing prior knowledge on a significant aspect of the interaction: *Why do sharks sink when they stop*

[1] From "Text-Based Questioning: A Comprehensive Strategy to Build English Language Learners' Content Knowledge," by A. Taboada, S. Bianco, and V. Bowerman, 2012, *Literacy Research and Instruction, 51,* pp. 107-108. Copyright 2012 by the Association of Literacy Educators and Researchers. Reprinted with permission.

swimming? Why is the polar bear's summer coat a different color? Why do all bats have sharp teeth? Do all snakes' fangs have poison in them?

- Requests a distinction among types of organisms within a species by using specific knowledge about that organism or its species: *What kinds of sharks lay eggs? What kinds of geese migrate? Do all butterflies migrate like the monarch butterfly?*

Level 4: Pattern of Relationships

Questions are characterized by requests for information on relationships among core concepts. Questions are differentiated from Level 3, because the emphasis is not solely on prior knowledge contained within the question, but also on relationships between two or more core concepts.

Examples of Students' Questions

Descriptions of animals' survival processes in which two or more core concepts are interacting with each other. *Do snakes use their fangs to kill their enemies as well as poison their prey? Do polar bears hunt seals to eat or feed their babies? When snakes change their blood temperature, is this a structural or a behavioral adaptation? Do all monarch butterflies migrate when they are adults or can they do this when they are just babies?*