

Understanding How Fourth-Grade Readers Monitor for, Identify, Clarify and Justify
Unknown Words and Phrases

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Abstract

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Before students read social studies informational text passages, it is a common practice among elementary school teachers to present fourth-grade readers with lessons that build prior knowledge of the content and vocabulary that appear in the text. For some fourth-grade readers this approach, *before reading*, may not adequately support their comprehension. The research in this study explores the effects of teaching fourth-grade readers to monitor for, identify, clarify, and justify the meaning of unknown words and phrases *during reading*. The findings in this study show that the successful comprehension of social studies informational text passages may be supported by the reader's ability to: monitor for unknown words and phrases; strategically use a resource to clarify the passage textbase; and use prior knowledge, new knowledge from a resource, and information from the passage textbase, to understand the passage situation model.

INTRODUCTION

As a result of growing diversity in student populations, it is difficult, as a teacher, to ensure that all readers in a classroom have sufficient prior knowledge, before reading, to access the common texts they will be expected to read. As a fourth-grade teacher, I conducted action research with my students to understand why my practice of activating and building prior knowledge did not sufficiently prepare them to comprehend informational text. Following this research I determined that, during reading, my students typically encountered five types of “triggering events” (Brown, 1980), where their ability to make meaning of unknown words/phrases broke down. I called these five types of triggering events, “5-Potential Clunks” (Anderson, 1980), and categorized them as: figurative language; proper nouns, including historical figures and events; domain-specific vocabulary and concept words; dictionary words (Beck, McKeown, & Kucan, 2002); and polysemous words.

As a result of my initial action research, I designed an instructional intervention to explicitly teach my students how to **monitor** for unknown words/phrases, to **identify** which of the 5-Potential Clunks the unknown words/phrases matched, to strategically use resources to **clarify** the meaning, and to use information in the text to **justify** the clarification fit the historical context of the text. I analyzed the effects of this intervention to help me understand how I might improve my instruction and my students’ learning.

In this paper, I first describe the background of the problem in two vignettes from my experience as a teacher, and the initial classroom research I conducted to more clearly understand the problem. I conclude this section with my research questions. Then, I review the research literature related to my study, followed by methods which include my instructional

unit and data sources. Next, I present my findings, discussion, conclusions, and limitations.

BACKGROUND

Research supports the common practice of activating and building prior knowledge as a part of teaching reading. For years as an elementary school teacher, I consistently used the practice before engaging my students in reading content that was new to them. Prior knowledge plays an important role in a reader's ability to comprehend text; comprehension being broadly understood as the ability of a reader to construct meaning by connecting what is read to what the reader already knows (Marzano, 2004; McConachie & Petrosky, 2010; McKeown, Beck & Blake, 2009; McKeown, Beck, Sinatra & Loxterman 1992; WA State Draft Comprehensive Literacy Plan 2012). Activating a reader's prior knowledge before reading can improve a reader's performance on recall and comprehension tasks of informational texts for adult readers (Alexander, Kulikowich & Schulze, 1994; Ozuru, Dempsey, & McNamara, 2009; Smith, Holliday, & Austin, 2010), secondary school-aged readers (Carr & Thompson, 1996; Spires & Donley, 1998; Tarchi, 2010), and elementary school- aged readers (Langer 1984; Lipson, 1982; Peeck, van den Bosch, & Kreupeling, 1982). These studies suggest that activating and building what readers know before reading, and then applying what they know during reading can influence a reader's comprehension no matter their age, so I believed the practice would be especially beneficial to my fourth- and fifth-grade readers. My thinking was that if my developing readers were taught how to use their prior knowledge to make meaning of content that was new to them, this skill would support their comprehension through adulthood. However, I discovered that activating and building enough prior knowledge for my readers to comprehend new content was problematic in my own classroom, and I feel it is a growing challenge for students as readers in America's

public schools.

Student populations in schools across the nation are becoming more diverse, and with diversity comes a variety of cultural, familial, personal, and educational experiences which make up a reader's prior knowledge base. As a result of growing diversity in student populations, it is difficult to ensure that all readers in a classroom have the prior knowledge to access the common texts that they will be expected to read. Teachers have tended to compensate for this in two ways, 1) Activating and building student prior knowledge of text content, and 2) modifying text so that the content is more cohesive and accessible to the reader.

It is considered best practice (and a practice encouraged by the reading and MLL facilitators in my school district) to preteach important vocabulary and historical context to students before they read an informational social studies text (Beck, McKeown & Kucan, 2002). Because of growing diversity in student populations, preteaching words and historical context based on student need is becoming a complex process. I teach in a highly diverse school district where the student population represents more than 80 different languages. If the student population in my classroom may be considered typical for an elementary school class within this district, on average, more than 62% of my students speak a language other than English in their homes, and each year my students represent 5-14 different cultural groups. This had been true for the seven years before I started this project (Table 1). In addition to their cultural and language diversity, students' reading levels in my class typically ranged from emergent literacy, to a high school grade equivalency. By the time I had activated and built enough prior knowledge of vocabulary and historical context to meet the diverse cultural, language and reading needs of my students, there was nothing left in the social studies text for

my readers to make sense of for themselves. I, essentially, had done all the reading for them (Goodman, 1976; Schallert & Klein, 1979).

Table 1

Student Demographics in One Elementary School Class in a Highly Diverse School District

School Year and Grade	Total Number of Students in Class	Number of Cultural Groups Represented	Number of Students who Speak Language other than English at Home	% of Multi-language Students in the Class
2011-2012 (5 th)	24	9	18	75%
2012-2013 (5 th)	25	9	16	64%
2013-2014 (5 th)	25	11	17	68%
2014-2015 (5 th)	21	13	11	52%
2015-2016 (5 th)	22	14	13	59%
2016-2017 (4 th)	26	12	11	42%
2017-2018 (4 th)	22	6	16	73%

Supporting comprehension by rewriting the text so that concepts are more coherent (Beck, McKeown, Sinatra & Loxterman, 1991), and concepts are explained in context to dispel common misconceptions (Diakidoy, Mouskounti & Loannides, 2011), is also problematic. Teachers simply do not have the time, nor the expertise to rewrite texts. Some modified texts are available through various curricula, but, again, teachers do not have the time to search for these texts nor do they have the funds to pay for them once they are found.

Activating and building student prior knowledge of vocabulary and historical context, are teacher moves that occur before the student engages in reading a text, but this support of student reading can only be as good as the ability of the teacher to anticipate what parts of the text the readers may have difficulties in comprehending. If a teacher guesses incorrectly, the readers may still have difficulties in comprehending text during reading. In my fifteen years of experience teaching fourth and fifth grade in

public elementary schools, I found the practice of activating and building prior knowledge supported my students in several ways, but many times my preteaching missed the mark. Two vignettes from my teaching experiences provide examples of this point that teacher moves such as these, *before* reading, may not entirely support readers' comprehension of text *during* reading.

VIGNETTE: *Dangerous Crossing* by Stephen Krensky (2004)
(as appears in Journeys basal reader, fifth grade, lesson 11,
Houghton Mifflin Harcourt Publishing Company, 2014).

Before Reading: Activation of and Building Prior Knowledge of Content Vocabulary and Historical Context

Before reading, I engaged the students in vocabulary study for the following words from the text: embark, surveyed, conduct, cramped, bracing, pressing, distracted, representatives, viewpoint and shattered. These words were highlighted in the text which appears in a basal curriculum used by my school district (Journeys basal reader, fifth grade, lesson 11, Houghton Mifflin Harcourt Publishing Company, 2014). This vocabulary study was comprised of three parts, first the students worked with partners to learn the meaning of one of the assigned words with the purpose of teaching the meaning of the word to the rest of the class. Each set of partners used a card provided by the curriculum which includes an activity to assist the students in understanding the meaning of the word (see Appendix A). Students completed the activity and checked their understanding with me, then created a short skit to show the meaning of the word in a dramatic scenario. Following each skit, the rest of the class worked together using a modified vocabulary organizer developed by Robert Marzano (Marzano Research, <https://www.marzanoresearch.com/reproducibles/vocab-common-core>), to negotiate the meaning of the word (see Appendix B).

Before reading, activation and building of prior knowledge of historical context was provided through several social studies lessons on Colonial America. Curricular materials included a textbook and several activities where the students were asked to imagine themselves in the time period and create writings taking different points of view (*History Alive! America's Past*, Teacher's Curriculum Institute, <https://subscriptions.teachtci.com/teacher/programs/231>).

During Reading: Applying Prior Knowledge

My students enthusiastically participated in all of the lessons to activate and build their prior knowledge of the vocabulary for this text, and the historical context of Colonial America. Yet, during the reading of an excerpt of *Dangerous Crossing*, an historical narrative of the journey John Adams and his son, John Quincy Adams, made to France during the American Revolutionary War, my fifth-grade readers unsuccessfully interpreted several passages in the text. Student interviews regarding their reading experience showed meaning broke down when students encountered words they recognized but did not understand in context: figurative language (“*The heavens frown, the clouds roll, the hollow winds howl, the waves of the sea roar upon the beach.*”), polysemous words (such as “odds”), and unfamiliar historical names and events (e.g., a ship named the “Boston,” and a reference to the Battle of Bunker Hill). In each of these cases literal thinking precluded inferential thinking and the students were unable to recognize that the figurative language described a storm; that the captain, looking at three warships in the distance was not thinking the ships were “strange,” but instead was worried that he would lose a fight, “He was not pleased with his three-to-one odds”; and that the word *Boston* in this case referred not to the city they were traveling from, but to the warship upon which John and Johnny Adams were traveling to France. The Battle of Bunker Hill, an

unknown historical event, was ignored by the students.

VIGNETTE: *Lewis and Clark* by Conrad Stein
(Journeys basal reader, lesson 25,
Houghton Mifflin Harcourt Publishing Company, 2014)

Before Reading: Activation of and Building Prior Knowledge of Content Vocabulary and Historical Context

The same activities and materials as described above were used for preteaching vocabulary for this passage. The words highlighted for instruction were: expedition, tributaries, trek, barrier, despite, fulfilled, range, techniques, resumed, and edible. To build prior knowledge of the historical context, the students actively participated in analyzing a National Geographic documentary on the Lewis and Clark expedition (Lewis and Clark the Great Journey West, <https://www.youtube.com/watch?v=OijGUOfyBXg>). The documentary is a reenactment of the same events described in the text passage the students would later read. As the students watched the documentary, they were asked to stop the video when they saw a problem, or a solution to a problem, the Corps of Discovery faced. The students discussed evidence from the video that gave the viewer information as to why the problem was a problem, and together matched and justified solutions to the problems identified. In their analysis of the video, the students became adept at using evidence from the reenactment to identify problems and justify their solutions. And yet, during the reading of the text the movie was intended to support, the students were unable to match some problems and solutions.

During Reading: Applying Prior Knowledge

“Crossing the Rockies proved to be a difficult ordeal. The trails were too rugged to ride on, so the party walked and used the horses as pack animals. In mid-September, a blinding snowstorm struck. Even the Shoshone guide got lost. Worst of all, the once-abundant wild game could not be found on the high mountain peaks. The explorers were forced to kill some of their pack animals for meat” (p. 759).

Working with four homogeneously-grouped sets of students for guided practice (one group reading above grade level, one group reading at grade level and two groups of students reading below grade level), none of the groups interpreted this section of the text correctly. When asked why Lewis and Clark and the Corps of Discovery were forced to kill their pack animals, students in all four groups stated that because of the snowstorm, the Corps could not find any animals. When asked to go back and re-read the text and read aloud the sentences that give the reader information about why the Corps of Discovery needed to kill their pack animals, students in all four groups read aloud the statement regarding the snowstorm, "... a blinding snowstorm struck," and the statement regarding killing pack animals, "the explorers were forced to kill some of their pack animals for meat."

When asked to look again at the passage and determine whether any other sentences give the reader information about why the Corps would need to kill their pack animals, students in all four groups said there were no other statements that provide this information. When I asked each group why they overlooked the statement, "*Worst of all, the once-abundant wild game could not be found on the high mountain peaks,*" each group stated it was because they did not know the meaning of the phrase, "once-abundant wild game."

In the case of the first vignette from *Dangerous Crossing*, my students simply stopped reading at the point the meaning broke down, and, as a result, did not make inferences to interpret the text. In the case of the second vignette from the Lewis and Clark passage, my students continued to read in spite of the meaning breaking down, consequently making incorrect inferences. In both cases, students did not recognize that they had encountered an unknown word/phrase, and did not stop to clarify the meaning. This limited their ability to fully

comprehend the text passages.

These vignettes show that even when a teacher engages students in activating and building prior knowledge of vocabulary and historical context *before* reading, more instruction is needed to support students in comprehending text *during* reading.

Monitoring one's understanding during reading, requires that readers are aware of a "triggering event" (Brown, 1980) or "clunk" (Anderson, 1980) when meaning breaks down, and that they strategically take action to "fix-up" (Collins & Smith, 1980) or clarify the meaning. Typical triggering events are the reader's realization that s/he has failed to understand: a word, a sentence, how sentences relate to one another, and/or how the whole text fits together (Anderson, 1980; Baker & Brown, 1980; Brown, 1980; Collins & Smith, 1980; Pitts, 1983).

Reflecting on my student's reading behaviors described in the two vignettes above, it became clear to me that my students were not aware that meaning broke down. They were not monitoring for triggering events, so they were unable to employ any fix-up or clarification strategies. I thought about similar experiences working with students in my 15 years of teaching reading, and carefully looked at the "clunks" my readers missed in the two vignettes.

Studying these two vignettes, I noticed that when reading informational social studies texts, five types of words/phrases commonly created triggering events for my readers: figurative language; proper nouns including historical figures and events; domain-specific vocabulary and concepts; dictionary words (Beck, McKeown, & Kucan, 2002); and polysemous words. I initially called these common triggers, *5-Aspects of text*, hereafter referred to as *5-Potential Clunks*. I knew I needed to explicitly teach my readers how to monitor their comprehension, and decided to create an intervention that would scaffold their ability to

monitor their comprehension in four ways: A) how to recognize that meaning has broken down, B) to identify which of the 5-Potential Clunks the unknown word/phrase matched, C) how to strategically use resources to clarify the meaning of the “clunk,” and D) how to justify that the clarification fit the context of the text.

I wondered if my readers in the first vignette from *Dangerous Crossing*, had noticed that meaning broke down and could **identify** polysemous words, would they have considered that the word “odds,” may have different meanings in different contexts? Could these readers have then strategically used a dictionary to **clarify** the meaning appropriate to the context of the passage: not strange, not an odd number, but the captain’s chances of winning a battle? Could these readers have then **justified** that the definition, “likeliness that something will happen,” fit the context and understood the author’s description of a ship captain worrying about an encounter with enemy warships?

These are the kinds of questions I explored in this study. As they worked to comprehend informational social studies text passages, I looked at the ways my readers monitored for unknown words/phrases, identified which of the 5-Potential Clunks the word/phrase matched, and used a variety of resources to clarify and justify that the meaning fit the context of the text. I then looked at what the instructional intervention helped my readers to comprehend in the text passages.

Research Questions

- ☐ **Monitoring:** After readers recognize that meaning has broken down, what reasons do they give for why the unknown word/phrase needs to be clarified?
- ☐ **Identification:** Are readers able to appropriately identify unknown words/phrases as one of the 5-Potential Clunks? What reasons do readers give for which of the 5-Potential Clunks the unknown word/phrase matches?
 - 5-Potential Clunks
 - Figurative language

- Proper nouns, including historical figures and events
- Domain-specific vocabulary and concepts
- Dictionary words
- Polysemous words

☐ **Clarification:** In what ways do readers use resources to clarify the meaning of unknown words/phrases?

☐ **Justification:** In what ways do readers fit the clarified meaning to the context of the text, and how does this justification influence comprehension of the text?

As I worked to design instruction that would prepare my readers to monitor for, identify, clarify and justify unknown words/phrases, I looked to the literature base for constructing meaning from text.

LITERATURE BASE

According to Kintsch (1986, 1988), deep comprehension of informational texts involves the reader's construction of a coherent representation of the text. This occurs at two levels: representation of the propositional textbase and representation of the text situation. These are referred to as the textbase and the situation model. A reader's representation of the *textbase* includes meaning constructed from understanding of sentences and propositions (ideas) across sentences in the text. Meaning taken from propositions that are adjacent to one another create local representations with local coherence; meaning taken from propositions from distant, though related, text parts that help build understanding of the text's main theme(s), create global representations with global coherence. The degree of coherence can also go beyond the text, as the reader incorporates ideas taken from the text with ideas outside the text, creating understanding for the situation model.

The *situation model* is the reader's representation of the situation in the world described in the text (Diakidoy, Mouskounti, & Ioannides, 2011; Schellings, Aarnoutse, & van Leeuwe,

2006). To construct the situation model a reader needs to integrate meaning from the textbase with prior knowledge of content and context (hereafter referred to as prior knowledge) to understand text meanings that go beyond the textbase (Schellings, Aarnoutse, & van Leeuwe, 2006). Kintsch (1988) called this process of reading comprehension the construction-integration model. The process of integrating meaning from the textbase with prior knowledge is commonly referred to as inferencing, and this is critical for creating the situation model and comprehending informational texts (Alexander, Kulikowich, & Schulze, 1994; Anderson & Pearson, 1984; Lipson, 1982; Pressley, Wood, Woloshyn, Martin, King, & Menke, 1992;). Diakidoy, Mouskounti, & Ioannid (2011), emphasize the important role inferencing plays in creating a coherent representation of text. “Establishing coherence relations,” Diakidoy, et al., state, “depends to a large extent on generating the inferences that are necessary to fill gaps in the text and link text parts to each other and to existing knowledge” (Ibid, p. 23). During this processing of text, the reader draws from information already known (prior knowledge), and information previously stated in the text, and through inferencing links these pieces of information with current information encountered in the text. In this process the reader creates a globally coherent representation of the text that researchers believe will provide a stronger basis for learning which will support the reader’s ability to use this learning for, as Diakidoy, et al., explain, “... further elaboration and integration when the topic of the text is revisited in another context” (Ibid.).

Kintsch and Diakidoy, et al., help us understand that making inferences during reading is a critical component of deep comprehension of texts and that linking information to prior knowledge is a critical aspect of making inferences which assist in the construction of a coherent representation of the text. For this study, it was my hypothesis that in order to link information from the text to prior knowledge, readers must first identify unknown

words/phrases, “clunks,” in the propositional textbase, and then use “fix-up” strategies to clarify their meaning. I reasoned that after clarifying the propositional textbase, readers could use their prior knowledge to justify that their clarifications fit the text, which would support drawing inferences to create an appropriate situation model. I assumed that connecting the clarified textbase to prior knowledge during reading, would aid my readers in making inferences appropriate to constructing the situation model, and thereby more fully comprehending informational social studies texts.

A common approach to supporting comprehension during reading involves teacher-directed instruction, where students read a text and answer questions that the teacher poses (Collins & Smith, 1980): usually questions about the topic, definitions of words that the teacher identifies, and the main idea of the text. Collins and Smith write that this approach emphasizes comprehension as a product of reading, as opposed to a process of reading (Ibid, p. 2). Another common approach places readers into small groups so that the teacher may directly assist those readers who have difficulties interpreting the text. Again, in this approach readers answer questions the teacher poses about the text. These teacher-directed approaches, write Collins and Smith, “...[do] not teach students what to do when they have difficulty comprehending parts of the text; nor [do they] teach them how to... [construct] an interpretation of the text” (Ibid.). To construct an interpretation of text, readers must first understand what they are reading. “A vital component of reading comprehension,” according to Pitts, “is the ability to monitor or judge the quality of one’s understanding (Pitts, 1980).

In my 15 years of teaching, I had used these approaches to reading instruction and realized that they, along with activating and building prior knowledge, were not enough to support reading comprehension.

Brown in her chapter, “Metacognitive Development and Reading” (1980), describes the importance of a reader’s purpose in comprehension monitoring:

The goal of reading is to achieve understanding of the text... [understanding the text] must be judged against the criteria set by the reader as a goal of the activity...the reader’s purpose determines how he or she sets about reading and how closely he or she monitors the purpose of reading, that is, understanding of the text (Ibid., p. 455).

In student-directed instruction, teachers prepare readers for monitoring their own comprehension. After teaching readers to stop when a word/phrase does not make sense, readers are then taught fix-up strategies to clarify the meaning. If an unknown word/phrase seems unimportant to understanding the text, the reader is taught to ignore the “clunk” and read on; the meaning may be clarified next in the text. If the reader anticipates that the meaning will be clarified much later in the text, s/he is taught to “tuck” a question regarding the meaning into memory and look for the answer after further reading. Similarly, the reader may be taught to make a guess or an hypothesis as to the meaning, and look for confirmation later in the text. Re-reading sections of the text is a strategy for determining meaning that was initially missed, and finally, the reader is taught to consult an expert source, such as a dictionary, to clarify the meaning (Collins & Smith, 1980).

With my intent to support readers in monitoring their own comprehension during reading, I decided to design an intervention that included more explicit instruction around using these fix-up strategies. When ignoring, re-reading and reading-on didn’t help to clarify meaning, I wanted my readers to be able to identify the type of “clunk” so that they could strategically use an expert source to clarify the meaning. Beyond the teaching of these common fix-up strategies, I wanted my readers to be able to take the clarified meaning and go back to the text and justify that it fit the context.

RESEARCH METHODS

Research Site and Participants

I studied my own students in a suburban public elementary school outside a moderately-sized metropolitan area in the Pacific Northwest region. I was in my fifteenth year of teaching in this school district. My experiences included teaching five years at the district's wealthiest and highest performing school, nine years at one of the district's least affluent and lowest performing schools, and one year teaching in the school district's elementary gifted program. In these fifteen years, I taught fifth grade eleven years, and fourth grade four years. For this study, I taught fourth graders in the gifted program.

For my own personal education, I double majored in theater arts and history as an undergraduate, hold a masters of arts in international studies – China Regional Studies, have completed my coursework for an endorsement in English as a second language, and am currently pursuing a doctorate in literacy.

My elementary school serves a diverse student population. As stated in the background section of this study, of the 22 fourth graders who participated in this study, six different cultural groups were represented. Sixteen of my students speak a language other than English at home. Of all the students, 12 were boys and 10 were girls.

INSTRUCTION

General Classroom Routines

Because the participants were my students in the school within which I taught, I was obligated to use school wide instructional routines for the instructional portion of this study. The three school-wide instructional routines I incorporated into my study design were: teacher

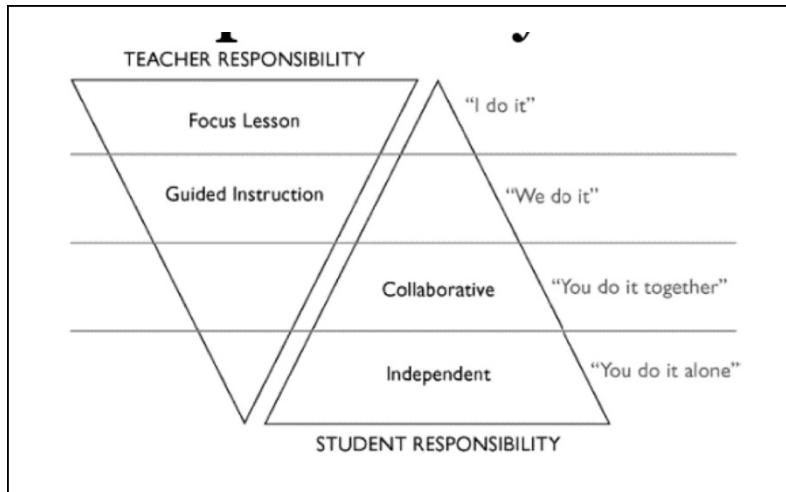
modeling with a think-aloud (K. Anders Ericsson & Herbert Simon, 1980; 1984, 1993), the Frey, Fisher and Everlove model for gradual release of responsibility (Frey, Fisher & Everlove, 2009), and Resnick's Accountable Talk (Michaels, O'Conner, Hall & Resnick, 2010).

When thinking aloud, teachers demonstrate how to think through problems encountered in reading, and help to make problem solving processes explicit to students. A typical example of this is when thinking aloud what I know about the words, "*The heavens frown, the clouds roll, the hollow winds howl, the waves of the sea roar upon the beach,*" I pointed out that the heavens frowning is personification, which is figurative language, and I asked my students to think about what this possibly meant, "When do we frown? Are the heavens frowning because they are sad? Are the heavens frowning because they disapprove of something? Are the heavens frowning because they are mad? What other clues can help us understand what the author means by this phrase? The next phrase says that the clouds are rolling. Do clouds seem to roll? When do they seem to roll?" In thinking aloud, I demonstrated for my students the kinds of questions they could ask during reading to help them clarify the meaning of unknown words/phrases in text; in thinking aloud, I presented them with a road map for how to go about the clarification process.

Based on Holdaway's Natural Learning Model (1979), Frey, Fisher and Everlove's model is comprised of four components: the focus lesson, which provides the teacher model in whole class instruction (I do), guided instruction with small groups (We do), peer to peer collaborative groups (You do it together), and independent practice (You do it alone) (see Figure 1). The details of how this model was incorporated into my instructional design are outlined in the *Instruction and Methods* section of this paper.

Figure 1

Frey, Fisher and Everlove Model for Gradual Release of Responsibility



Developed by Resnick and the Institute for Learning at the University of Pittsburgh, Accountable Talk (AT) is a research-based protocol for using classroom discussions to support student learning in all content areas. Students use scaffolded sentence stems to guide their responses during all-class and small group discussions. Accountable Talk is comprised of three components and subsequent facets (Michaels, et. al., 2010). In the first component, students hold one another *Accountable to the Learning Community* by listening carefully to one another and building on one another's ideas. Individual students hold themselves accountable for understanding what other students are saying. If understanding breaks down, these students are encouraged to ask questions for clarification. Facets of the Accountable to the Learning Community component of AT include: listening; summarizing; building on a classmate's comment(s); and marking, or drawing attention to the importance of a classmate's idea.

In the second component, students are *Accountable to the Knowledge*, or content they are studying, by making sure their comments are as accurate as possible. In this

component of AT, students verify, or check what they know with prior knowledge and comments made previously. Students unpack their statements by explaining their thinking, and students provide support for their thinking by citing evidence and making clear how their points connect to previously made points.

In the third component, students hold one another *Accountable to Rigorous Thinking* by using structures of logical argument to make claims, provide evidence and warrant the evidence by justifying how the evidence is appropriate for supporting the claim. What is considered an appropriate type of evidence or form for the warrant is dependent upon the epistemology of the content area in which the discussion is taking place.

I used the components and facets of Accountable Talk in both whole-class and small group discussions throughout the study. In the case of using AT during discussions of informational text, readers held one another accountable to knowledge and rigorous thinking by requiring that their claims were supported with evidence taken from a synthesis of the text (Kintsch's *textbase*), and warranted the evidence using their prior knowledge and information in the text passage (Kintsch's *situation model*).

INSTRUCTION AND METHODS

Instruction (subsequently referred to as the *unit of instruction*, or, *the unit*) for the study included tasks for comprehension monitoring: how to recognize that meaning has broken down, to identify which of the 5-Potential Clunks the unknown word/phrase matches, how to strategically use resources to clarify the meaning of the “clunk,” and, how to justify that the clarification fits the context of the text.

For the purposes of this study, I defined each of the 5-Potential Clunks as follows:

- **Figurative language** is typically a phrase that has words that are known but may

not make sense when all the words are put together, such as personification and idioms.

- **Proper nouns** are the names of people, places and things, such as historical figures and locations.
- **Domain-specific content words** are terms typically found within a domain and may not appear in other domains, such as, “inflation,” and “pandemic.”
- **Domain-specific concept words** are terms that describe larger ideas within a domain such as liberty and freedom.
- **“Dictionary” words** are terms that are unknown tier II words (Beck, McKeown, & Kucan, 2002). Typically tier II words are described as words that are used widely and commonly known. I defined “dictionary” words as words that are widely used but are either unknown to the reader or not recognized in the context of a social studies informational text. “Dictionary” words are words that remain unknown to the reader even after using context clues and common “fix-up” strategies like re-reading, and reading on.
- **Polysemous words** have more than one meaning and are dependent on context, such as bank and stock. *Bank* may refer to a financial institution or the side of a river. *Stock* may refer to a financial exchange, the inventory in a store, the butt of a gun, or *livestock*.

The Oregon Trail was the topic of the reading materials used, which the readers studied throughout the school year, beginning in October, 2017 and continuing through June, 2018.

The unit of instruction was conducted over four weeks, May 22, 2018 through June 19, 2018.

Three informal assessments were given within the study: two during the unit of instruction,

and one following the unit (see Measures section). The unit of instruction was facilitated four days per week, averaging two hours each day.

General Description of Unit of Instruction

Typical of my teaching practice, I started the unit of instruction with a discussion of the Common Core State Standards (CCSS) relevant to our tasks, and set a goal and purpose for what the readers would be doing.

CCSS:

RI.5.1: Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.

RI.5.4: Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area. (For this study we used a grade 4 topic and subject area.)

RI.5.7: Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

Goal

We will learn how to use multiple resources (print and digital) to clarify unknown words and/or phrases in informational text.

Purpose

We will clarify text to better understand what the author wants us to know.

Table 2

Chronology of Instruction

Date	Instruction
May 22	• Reviewed relevant Common Core State Standards • Established Goal and Purpose for study • Described examples of 5-Potential Clunks • Teacher model for identifying, clarifying and justifying clarifications (ICJ) for Proper Nouns ○ Teacher Model: monitoring during reading to know when meaning breaks down, and identifying unknown words/phrases. ○ Teacher Model: selecting and using resources to clarify unknown words/phrases

	○ Teacher Model: making justifications for fitting the clarification to the text
May 23	• Reviewed Goal and Purpose for study • Shared work: identifying and highlighting Proper Nouns in first paragraph of David Dary chapter 6 text • Clarified Proper Nouns identified and justified the clarifications as they related to the David Dary chapter 6 text. Recorded this information in organizer • Gradual release for identifying 4 other Potential Clunks in the first and second paragraphs of David Dary chapter 6 text • To prepare for Zigsaw sharing of the next 3 paragraphs of David Dary chapter 6 text, assigned readers to one of 8 teams for peer work in ICJ unknown words/phrases for one of the 3 paragraphs
May 24	• Reviewed 5-Potential Clunks and the ICJ process • 8 teams of readers continued work in ICJ unknown words/phrases in a subsequent paragraph of David Dary chapter 6 text ○ Team discussion for ICJ recorded using digital recorders
May 25	• Teacher model for discussion triad Zigsaw ○ One reader from each of the 3 paragraphs (A, B, C) sit knee-to-knee ○ The reader of paragraph A reads the paragraph aloud, discusses the meaning of the ICJ of unknown words/phrases ○ Summarize the paragraph ○ Repeat for readers of paragraphs B and C • Readers attempted triad discussions. I noted difficulties with readers' ability to summarize • To practice summarization, readers in discussion triads summarized familiar nursery rhymes • Triads returned to Zigsaw discussion
May 29	• Reviewed 5-Potential Clunks • Readers participated in Plickers quiz to reinforce understanding of the distinctions between each of the 5-Potential Clunks • Teacher model for monitoring during reading to know when meaning breaks down, and identifying unknown words/phrases. • Teacher model for using Self-Evaluation Organizer to record what the reader already knows in the text, and identified unknown words/phrases (what the reader wants to know) • Readers independently ICJ unknown words/phrases using resources and record work in personal ICJ organizer • I evaluated the readers' ICJ organizers as an informal assessment and discovered the readers' clarifications of unknown words/phrases were appropriate, but the justifications did not fit the text
May 30, 31	• Shared review of Claim, Evidence, and Reasoning (CER) • Guided instruction for writing justifications of clarified words/phrases ○ Met with readers grouped by performance on informal assessment ○ Readers not meeting in group with me, worked independently on interpreting page 3 of David Dary text which describes the election of wagon team leader of first large crossing of the Oregon Trail
June 4, 5	• Peer practice Clarifying and Justifying clarified words/phrases ○ Readers worked in six small groups using teacher selected resources to Clarify and Justify teacher selected words: ▪ Savage, Civic, and Military ▪ Readers used additional resources as desired ○ Group discussions recorded using digital voice recorders

	Group rewrote Mr. Field's description of election of wagon team leader 3 times, one each in terms of Savage, Civic, or Military
June 6	- Reviewed CCSS, Goal and Purpose - Shared discussion of how our work matches CCSS, Goal and Purpose - Provided exemplars of how readers were meeting CCSS, celebrations - Shared work rewriting CER example from May 30 in terms of the clarification and justification for Civic - Readers completed work from June 4-5
June 7	- Independent informal assessment - Readers read chapter 6, page 4 of David Dary text to ICJ unknown words/phrases - Used Self-Evaluation organizer and resources of the reader's own choosing
June 8	- Shared review of Goal, Purpose and 5-Potential Clunks - Readers completed informal assessment from June 7
June 11, 12	- Teacher instructions for modification of ICJ organizer - Readers worked in peer groups to modify the ICJ organizer to make the structure of the spaces and instructions on the organizer more explicit - Peer groups prepared to present their suggested modifications to the whole class
June 13, 14	- Peer groups presented their suggested modifications to the ICJ organizer - Whole-class discussion regarding the merits of each suggestion - Whole-class discussion recorded using digital recorder
June 11-15, 18, 19	- Individual informal assessment with teacher - Readers read short section of <i>America Adjusts to Peace</i> (QRI-6) - Readers Identified, clarified and justified clarifications of unknown words/phrases - Discussion with teacher recorded using digital voice recorder

Materials

For the unit tasks, I selected reading materials that were readily available to me via school and public libraries, as well as online resources, and resources available in Kindle version. Examples of texts used for the unit included:

- ☐ *The Oregon Trail* by Michael J. Trinklein (2011), a textbook style facts and myth- busters account of the people who crossed America on the Oregon Trail.
- ☐ *The Oregon Trail: An American Saga* by David Dary (2007), a narrative of the history of the Oregon Trail from its beginnings to the present. Kindle edition.
- ☐ *The Oregon Trail: A New American Journey*, by Rinker Buck (2015), a modern day crossing of the Oregon Trail.
- ☐ *The Oregon Trail: Sketches of Prairie and Rocky Mountain Life*, by Francis Parkman (1847), an oral history of people's experiences crossing the Oregon Trail.

- *Across the Plains in 1844*, by Catherine Sager (2012), the published diary of Catherine Sager who crossed the Oregon Trail as a child.

Monitoring and Clarification Tasks: scaffolding for strategic use of 5-Potential Clunks and resources to clarify unknown words/phrases

Social Studies Tasks

To build prior knowledge of vocabulary, content and historical context, I taught a social studies dramatic reenactment of the challenges on The Oregon Trail. I used the curriculum, *Pioneers: A Simulation of Decision Making on a Wagon Train* (Interact, 2001), teaching it prior to, and concurrently with the monitoring and clarification tasks. The *Pioneers* curriculum is similar to other dramatic role-play curricula widely used for fourth grade in my school district. Within the nine lessons, my readers used texts, visual representations, physical models, music and dramatic reenactments to understand what it was like to cross the Oregon Trail in mid-1800 America.

All text passages for the unit of instruction and assessment used for this study, were analyzed for the 5-Potential Clunks. Each of the text passages contained each of the 5-Potential Clunks, highlighted as follows: figurative language, purple; proper nouns, blue; domain-specific content and concept words, green; dictionary and polysemous words, orange. Figure 3 provides an example of one analyzed and highlighted passage.

Figure 2

Passage Highlighted for 5-Potential Clunks

They also decided that they would wait until after they crossed the Kansas River before electing officers.

To guide them to Oregon County, the emigrants hired fifty-three-year-old John Gantt, an experienced fur trader, trapper, and former captain in the U.S. Army. He said he would guide them for \$1 per person. Some years earlier Gantt had been kicked out of the army for supposedly falsifying pay accounts. He then became a partner with mountain man Jefferson Blackwell and traded with the Indians. Later the two men built a trading post on the Arkansas River near where William Bent had established a post. The competition became stiff, and Bent won. Gantt then spent some time guiding an expedition headed by Colonel Henry Dodge charged with improving relations with Indians on the plains and the eastern slope of the Rockies. Afterward, Gantt returned to Missouri, where in 1843 the emigrants hired him as their guide.¹

With Gantt leading the way, the wagons left Elm Grove on the morning of May 22. Because of spring rains, the mule-drawn wagons left first, to avoid getting stuck behind the slower ox-drawn wagons. Herded along with the wagons were more than a thousand head of cattle owned by Jesse and Lindsay Applegate and Daniel Waldo. For everyone it was something of an experiment. Such a journey with so many men, women, children, wagons, and livestock had never been attempted on the western prairie and plains. Travel was slow. To make matters worse, there were frequent spring rains that created much mud. About five days later the vanguard of the emigrants' wagons reached the Kansas River at the modern-day site of Topeka. The rest of the wagons caught up the following day.

Camped on the south side of the Kansas River, Rev. David Lenox and others apparently tried to make a deal with Joseph Papan, who operated a ferry to carry travelers and their wagons across the stream. Papan's ferry was nothing more than a wooden platform attached to two canoes. Papan, however, would not agree to the terms the emigrants proposed, so the emigrants began building their own ferry. Lenox's sixteen-year-old son, Edward, recalled that his father acquired three dugout canoes from a Frenchman living nearby, constructed a platform, and fastened the dugouts about four feet apart under the platform, thereby creating a primitive raft. The task of ferrying wagons one at a time across the Kansas River began.²

Excerpt taken from David Dary's, *The Oregon Trail: An American Saga*, chapter 6

Instruction: Comprehension Monitoring, Identification, Clarification and Justification of Unknown Words/Phrases

Throughout the unit of instruction, I used teacher think-aloud, gradual release of responsibility and Accountable Talk for scaffolding my readers' ability to monitor for, identify, clarify and justify unknown words/phrases. What follows is a description of how I incorporated these approaches for learning in my instruction.

Check for Prior Knowledge

I introduced the 5-Potential Clunks: figurative language; proper nouns including historical figures and events; domain-specific content and concept words; dictionary words; (Beck, McKeown & Kucan, 2002); and polysemous words. In an all-class discussion, the readers used their prior knowledge to give me examples of each of the 5-Potential Clunks:

- *Figurative Language*: idioms, symbolism, metaphor, simile, hyperbole, irony, sarcasm, personification, onomatopoeia, litotes, puns.
- *Proper Nouns*: a person, place, or thing. A name and it is capitalized: Mrs. G-Z, Bellevue, Bald Eagle.
- *Domain-specific Content and Concept words*: union, republic, protection, service, war, peace, civics.
- *Tier II Words*: election, military.
- *Polysemous words* (stock): to take stock, livestock, stock the shelves, the stock of a gun.

Teacher Model (I do)

In my initial teacher model, I shared my thinking aloud for monitoring for words/phrases that were unknown to me, and stopped my reading to identify which of the 5-Potential Clunks the unknown word/phrase matched. To begin, I said something like, “Sometimes reading social studies texts can be confusing to me. There may be some words and maybe some phrases that I understand when I read the words one-by-one, but they don’t make sense in the passage I’m reading. Well, I feel like those words are “clunks.” When I come to those words suddenly my understanding of the passage stops, like a clunk! Has that ever happened to you when you were reading a social studies text? I have some strategies that may help us make sense of those confusing words and phrases. We can look for some specific types of “clunks” in the text and work to make sense of them. Five of these potential clunks

are: figurative language; proper nouns including historical figures and events; domain-specific content and concept words; dictionary words; and polysemous words.

To begin the demonstration, I used a social studies informational text written by David Dary titled, *The Oregon Trail: An American Saga* (2004). In a shared reading task, each reader had a paper copy of the text, and I projected a copy onto our classroom Smartboard. Reading aloud the shared text, I did a think-aloud to make explicit my process for monitoring for, and identifying the first unknown word/phrase I encountered, which was the proper noun, David Dary, the author of the shared text. I wondered aloud who David Dary was and whether knowing who he was would help me to understand the credibility of his book. In our shared copy of the text, I highlighted the name, David Dary, in the citation of the book (Figure 3), and wrote the name in a large *Identification, Clarification, & Justification* organizer (ICJ organizer), (see Appendix C). The readers wrote David Dary's name in their own copy of the ICJ organizer, and we labeled the Potential clunk, *proper noun*. I modeled my thinking about my decision to use Internet resources to clarify who David Dary was

(<http://www.boothill.org/david-dary-cowboy-historian/> [4/15/18, 12:29:13 PM],

<http://www.tribute.care/obituaries/David-A-Dary?obId=3021149> [4/15/18, 12:32:05 PM],

<http://www.lib.k-state.edu/apps/findingaids/?p=creators/creator&id=95> [4/15/18, 12:27:26

PM]). After using the resources to clarify, we wrote the following in the clarification section of the ICJ organizer:

David was an author, and a journalist, and a social historian. He worked on newspapers in Kansas and Texas, and on television for CBS and ABC News. He was a professor at the University of Kansas. He wrote about the American West (see Figure 4).

The readers and I then discussed our justification for the clarification, and how we knew the clarification fit the text. In the justification section of the ICJ organizer we wrote:

I know this bio matches the author of the book we are reading for two reasons. First of all, he was a historian of the American west and stories from the Oregon Trail are a big part of the American western heritage. The second reason is that the book we are reading is listed in the biography.

Figure 3

Identification, Clarification, Justification (ICJ) organizer

WORD OR PHRASE	TEXT ASPECT	RESOURCE	CLARIFICATION	JUSTIFICATION
David Dary	Proper Noun	Internet	David was an author, and a journalist, and a social historian. He worked on newspapers in Kansas and Texas, and on television for CBS and NBC news. He was a professor at University of Kansas. He wrote about the American west.	I know this bio matches the author of the book we are reading for two reasons: first of all he was a historian of the American west and stories from the Oregon Trail are a big part of the American western heritage. The second reason is that the book we are reading is listed in the biography.
William Hazlitt	Proper Noun	Internet	Hazlitt was an English philosopher and social commentator in the 1840s. At the same time people were crossing on the Oregon Trail so his thinking may have influenced people going west.	Because Hazlitt wrote before the 1840s it is a reasonable claim that his thinking may have influenced people going west.
Westport	Proper Noun	A map of the Oregon Trail	Westport is near Independence, MO, and there is Independence Westport road.	The resource is a collection of maps of the Oregon Trail published in Missouri. This seems to be a reasonable resource because Independence is in Missouri and was the "jumping off" place for many settlers who went on the Oregon Trail.
Dr. Marcus Whitman	Proper Noun	Washington Area Journal The Oregon Trail by Rinker Buck Internet to Search Rinker Buck	From the textbook I learned that Dr. Whitman was a missionary and that a missionary is someone who teaches people about a religion. Dr. Whitman taught "Indians" about Christianity. From the Rinker book I learned that Dr. Whitman's wife Narcissa went west and thought to be a missionary, but the American Board of Commissioners for Foreign Missions would not allow an unmarried woman to be a missionary. So Narcissa married Dr. Marcus Whitman, who she barely knew. We also learned that missions near the Missouri River were considered foreign because they were in lands disputed by Mexico, Britain, and the U.S.	Rinker Buck actually traveled in a covered wagon along the modern day route of the Oregon Trail in 1958 when his grandfather said they needed to move from New Jersey to Pennsylvania. Buck was also a journalist and researched the people who crossed on the Oregon Trail.

Guided Instruction (We do)

After the teacher model, the readers and I moved through the Frey, et. al., model for gradual release. In the "We do" task, small groups of readers worked together to monitor for, identify, clarify and justify other proper nouns in the David Dary text: William Hazlitt, Westport, and Dr. Marcus Whitman. The small groups then shared their work with the whole class and, as a class, we negotiated the appropriate clarification and justification to record in our ICJ organizer.

Informal Assessment: Peer Collaborative Practice (We do it together)

To assess their ability to clarify and justify an assigned word, civic, I placed my fourth-grade readers into small heterogeneous groups of three or four, with considerations for reading ability, personality, and relationships that allowed for cooperation between the readers. Each of

the six groups used a digital recorder to record discussions about the clarification of the word, found in chapter six of David Dary's, *The Oregon Trail: An American Saga*. In this chapter Dary tells the story of a group of privileged men who traveled the Oregon Trail in 1843 for "pleasure." Called the Pleasure Seekers, they traveled with an entourage of hunters and servants, and Matthew C. Field, an assistant editor of the New Orleans Picayune, whose purpose was to chronicle The Pleasure Seekers' experiences on the trail. On May 31, the Pleasure Seekers arrived at the camp of the first large wagon train to make the crossing, just in time to witness the June 1st election of the commander-in-chief for the more than 100 wagon caravan. Field described the election in a letter sent to the New Orleans Picayune:

It was a curious and unaccountable spectacle to us, as we approached. We saw a large body of men wheeling and marching about the prairie, describing evolutions neither recognizable as savage, civic, or military. . . . We found they were only going on with their elections, in a manner perhaps old enough, but very new and quizzical to us. The candidates stood up in a row before the constituents, and at a given signal they wheeled about and marched off, while the general mass broke after them "lickity-split," each man forming in behind his favorite, so that every candidate flourished a sort of tail of his own, and the man with the longest tail was elected! (Elipsis found in Dary chapter, Dary, David. The Oregon Trail: An American Saga (Kindle Location 1499). Knopf Doubleday Publishing Group. Kindle Edition.)

To clarify the word, *civic*, each group watched the same video I assigned from We the People, "How to Become President of the USA" (<https://www.youtube.com/watch?v=2eXCG-hlaqI>), describing the United States process for electing the president, who is the country's commander-in-chief I chose to provide the video as a resource thinking that the readers would make a connection between electing the president of the United States as the country's commander-in-chief, and a statement Dary makes following the description from Field's letter, "Although Field does not identify the winner, Peter Burnett, a native of Tennessee, was elected commander-in-chief." Before the groups began their work to clarify the word, we talked in a

whole-class discussion about this connection between the president as the commander-in-chief of the United States, and Peter Burnett as the commander-in-chief of the wagon train. It was my thinking that in clarifying the word, *civic*, the readers would make specific connections between the civic process for electing the US commander-in-chief, and what could have been the civic process for electing the commander-in-chief for the wagon train.

After watching the video, the groups had access to other resources to use for further clarification of the word, *civic*, and any other words/phrases they identified to clarify. The resources available included: dictionaries, encyclopedias, trade books about the Oregon Trail, and the Internet.

All six groups discussed the information in the video regarding the requirements to run for president of the United States, and the US electoral process. Roaming throughout the classroom, listening in on each group's clarification discussions, informed me that their clarification and justification of the word, *civic*, may have been influenced in three different ways:

- 1) Using information in the video and/or dictionary, and seemingly making no associations to prior knowledge
- 2) Using associations between information in the video and/or dictionary, and seemingly unrelated prior knowledge
- 3) Using associations between information in the video and/or dictionary, and seemingly related prior knowledge

Thinking about the importance of inferences as a critical component of deep comprehension of texts, and that linking information from the text to prior knowledge is a critical aspect of making inferences (Kintsch, 1988; Diakidoy, et. al., 2011), I wanted to know more about how my readers were using their prior knowledge to clarify and justify their clarifications of unknown words/phrases. I designed the final assessment to include prompts to elicit this information.

Final Assessment: Independent Practice (I do it alone)

The final week of instruction, each of the 22 readers met with me, one-on-one, to participate in a final assessment of the ways in which s/he monitored for and identified 5-Potential Clunks, and strategically used resources to, clarify and justify unknown words/phrases. The assessment also gave me information about what these clarifications helped each reader to understand of the passage textbase, and situation model.

I conducted the final assessment during an end-of-year conference with each reader and one or both of his/her parents. The parents were silent observers during the data collection interview.

Each student read one section of the article, “America Adjusts to Peace,” a passage found in the Inference-Diagnostic portion of the Qualitative Reading Inventory-6 (QRI-6), by Leslie and Caldwell (Leslie & Caldwell, 2017). I used a modified think-aloud task, and asked each reader to read one short section of a passage, and prompted the reader to answer questions such as:

1. While reading, stop and tell me what words/phrases you would need to clarify in order to understand what the author wants you to know.
2. What would the clarification help you to understand?
3. Which of the 5-Potential Clunks is the unknown word/phrase, and what resource would you use to clarify it?

I chose the passage, “America Adjusts to Peace,” a high school level text, broken into five sections: the introduction which I will refer to as *America Adjusts to Peace (introduction)*, *Flu Epidemic Grips the Nation*, *Women and African Americans Confront New Realities*, *Inflation Leads to Labor Unrest*, and *The Red Scare*. As it appears in the QRI-6, each section has inferential questions embedded within the text. I printed each section without these inferential questions because I felt they would influence the reader’s ability to make his/her own inferences. Each reader read only the text portion of the passage section.

I selected the passage, “America Adjusts to Peace,” because I wanted each reader to clarify a short instructional level text, about a topic we had not studied during the course of the school year. My thinking was that instructional level texts on topics not explicitly studied would provide unknown words/phrases for the readers to encounter. I analyzed each section for 5-Potential Clunks, and found that each section contained several examples of each of the 5-Potential Clunks. Table 5 provides an example of the 5-Potential Clunks I identified for the section, Flu Epidemic Grips the Nation. For an analysis of the 5-Potential Clunks, in all of the passage sections see Appendix D.

Table 3

Analysis of 5-Potential Clunks: Flu Epidemic Grips the Nation

Level & Name of Passage	High School America Adjusts to Peace Flu Epidemic Grips the Nation
Figurative Language	- The movement from war to peace would have been difficult even in the best of times. - Once the virus began, it spread like a wildfire and killed millions worldwide like a predator feasting on its prey. - The great influenza pandemic, coming on the heels of the Great War, gave a sense of doom and dread to people around the globe.
Proper Nouns incl. Historical Figures & Events	The great influenza pandemic, coming on the heels of the Great War, gave a sense of doom and dread to people around the globe.
Domain-Specific Content & Concept Words	- The movement from war to peace would have been difficult even in the best of times. - Research in recent years shows that the 1918 influenza virus was originally a bird flu that mutated to spread to humans. - The great influenza pandemic, coming on the heels of the Great War, gave a sense of doom and dread to people around the globe.
Dictionary Words (unknown Tier II Words)	- The movement from war to peace would have been difficult even in the best of times. - In September 1918, an unusually deadly form of the influenza, or flu, virus appeared. - Once the virus began, it spread like a wildfire and killed millions worldwide like a predator feasting on its prey.

Polysemous Words	• Street car conductor in Seattle not allowing passengers aboard without a mask.
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In my unit of instruction, I crafted social studies tasks to activate and build my readers' prior knowledge of content vocabulary and historical context, and taught these tasks concurrently with my intervention for monitoring for, identifying, clarifying and justifying unknown words/phrases. For the final assessment I intentionally selected text passages on topics we had not studied during the course of the school year, so that my readers would likely encounter clunks, but I also knew that if the reader had little to no prior knowledge of the content, s/he may encounter too many unknown words/phrases to clarify.

To prepare the materials for the final assessment, I thought about the information in each of the passage sections and looked for what I think of as "text comprehension demand." Even though "America Adjusts to Peace," is labeled a high school level text, a review of each passage section showed different levels of comprehension demand. To determine the comprehension demand, I reviewed each section for:

- Whether the text provided clarifying clauses
- Anticipated reader prior knowledge of content and historical context
- Anticipated lack of reader prior knowledge of content and historical context
- Anticipated reader familiarity with domain-specific content and concept words
- Anticipated reader unfamiliarity with domain-specific content and concept words
- Total number of words in the text

My predictions were based on my fifteen years of experience teaching fourth- and fifth-grade readers, and my knowledge of the particular readers who participated in this study, whom I had taught for eight months prior to their participation in this final assessment. See Appendices E and F for my review of each passage section for text comprehension demand.

During the final assessment, I assigned the short passage sections based on three criteria: my analysis of the comprehension demand of the passage section, each reader's results from the

Grade-Level-Diagnostic portion of the QRI-6 assessment, and my knowledge of each reader's typical level of confidence to articulate his/her thinking about his/her interpretations of text. My knowledge of each reader's confidence in articulating this thinking was based on eight months of observations of my reader's participation in all-class, and small group discussions about texts, and one-on-one reading conferences with me.

Based on these three criteria, *America Adjusts to Peace (introduction)* and *The Red Scare* passage sections were assigned to readers who were the most capable, *Women and African Americans Confront New Realities* was assigned to readers who were less capable, and *Inflation Leads to labor Unrest* and *Flu Epidemic Grips the Nation* were assigned to readers who were least capable. I ordered the passage sections, from higher comprehension demand to lower comprehension demand (1-3 most to least) as:

- 1) *America Adjusts to Peace (introduction)*, and
The Red Scare
- 2) *Women and African Americans Confront New Realities*
- 3) *Inflation Leads to Labor Unrest*, and
Flu Epidemic Grips the Nation

Table 6 shows the passage section I assigned to each reader. The reader's names have been changed to the character names each reader used during our Oregon Trail unit of instruction.

Table 4

Passage Sections Assigned to Readers

Reader	QRI-6 Middle School (MS) High School (HS)	Passage Section Assigned	Comprehension Demand Rank Analysis (1-3 most to least)
Nate Page	HS Independent	America Adjusts to Peace	1
Elizabeth Mingo	MS Independent	America Adjusts to Peace	1
Irene Brown	HS Independent	The Red Scare	1
Caleb Butler	HS Instructional	The Red Scare	1
James Seiple	HS Instructional	The Red Scare	1

Tony Wilson	HS Instructional	The Red Scare	1
Martha Long	HS Instructional	The Red Scare	1
John Brown	MS Instructional	Women and African Americans Confront New Realities	2
Paul Bryant	MS Independent	Women and African Americans Confront New Realities	2
Lavina Wright	HS Instructional	Women and African Americans Confront New Realities	2
Michell Calloni	HS Instructional	Women and African Americans Confront New Realities	2
Francine Conrad	MS Independent	Inflation Leads to Labor Unrest	3
Pat Richards	MS Independent HS Frustration	Inflation Leads to Labor Unrest	3
Amanda Black	HS Instructional	Inflation Leads to Labor Unrest	3
Kenneth Flag	6 th Instructional	Flu Epidemic Grips the Nation	3
Esther Cotton	MS Instructional	Flu Epidemic Grips the Nation	3
Sophie Cline	MS Instructional	Flu Epidemic Grips the Nation	3
Anna Ives	MS Independent HS Frustration	Flu Epidemic Grips the Nation	3
Molly Eller	MS Independent HS Frustration	Flu Epidemic Grips the Nation	3
Larry Morris	MS Independent	Flu Epidemic Grips the Nation	3
Doc Albert	HS Instructional	Flu Epidemic Grips the Nation	3
Walter Sanders	HS Instructional	Flu Epidemic Grips the Nation	3

MEASURES

As the teacher and researcher for this study, I was placed in the role of a participant researcher (Anderson, Herr & Hihlen, 2007; Glesne, 2006). As the researcher, I needed

student products and assessments that provided empirical evidence to support answers to my research questions. As the teacher, I was obligated to use student products and assessment tools regularly used in my school district. For these reasons I used formal and informal measures common to my teaching practice and widely used within my school district.

The design of this study falls under the category of action research. Because I was both the researcher and the teacher, instruction was assessed informally throughout the four-week instructional period. Based on the outcomes of these informal assessments, instruction was modified to meet the individual needs of students. Modifications included redesigning student organizers, providing additional instructional supports, and changing lesson activities. In an effort to be responsive to student learning, modifications such as these, are common in my teaching practice. The final assessment was designed specifically to provide data to analyze for this study. I used coding protocols for the constant comparative method of grounded theory (Corbin & Strauss, 2008; Glaser & Strauss, 1967) for data analysis.

List of Formal Measures: Before Instruction

- Assessments of reading comprehension included:
 - Leslie and Caldwell's Qualitative Reading Inventory sixth edition (QRI-6)
 - Grade level diagnostic passages for determining student reading level before the unit of instruction.
 - Renaissance Learning computer adaptive, STAR reading assessment.

Measure used for Study Data Analysis: Following Instruction

- Leslie and Caldwell's Qualitative Reading Inventory sixth edition (QRI-6)
 - Inference-Diagnostic passages assessed the ability of my readers to monitor for, identify, clarify and justify unknown words/phrases. Transcriptions of the audio recordings captured student discourse for analysis.

Table 5*Measures and Data for Analysis*

Evidence of	Measure	Data and Analysis
Reading Comprehension Level before Unit of Instruction	☐ Leslie and Caldwell's Qualitative Reading Inventory sixth edition (QRI-6) Grade level diagnostic passages	☐ Answers to explicit and implicit comprehension questions ☐ Retellings ☐ Grade level equivalency
	☐ Computer adaptive Renaissance Learning, STAR reading assessment	☐ Lexile scores ☐ Grade level equivalency
Final Assessment	☐ Digital recordings of individual reader's responses to teacher prompts using texts from Leslie and Caldwell's Qualitative Reading Inventory sixth edition (QRI-6) Inference-Diagnostic Passages, (Modified with Teacher Prompts)	Discourse that shows the strategic use of 5-Potential Clunks and resources to identify, clarify and justify the meaning of unknown words/phrases in responses to questions such as: ☐ While reading, stop and tell me what words/phrases you would need to clarify in order to understand what the author wants you to know. ☐ What would the clarification help you to understand? ☐ Which of the 5-Potential Clunks is the word/phrase and what resource would you use to clarify it? ☐ What does the clarification help you to understand?

FINDINGS

I transcribed and analyzed audio recordings for 17 of the original 22 readers. Four readers' interviews were not recorded. My field notes for these readers included evidence of monitoring for and identification of unknown words/phrases, and the readers' rationale for why the word/phrase would need to be clarified. These data are included in my analysis. My notes for these readers had insufficient evidence of clarification and justification of the unknown

words/phrases. The fifth reader's interview was recorded, but the recording was inadvertently deleted, so his data is not included in my analysis. My transcriptions and field notes were coded and categorized.

Analysis of Monitoring and Identification

Research Question Monitoring: After readers realize that meaning has broken down, what reasons do they give for why the unknown word/phrase needs to be clarified?

As the readers read their assigned passage section, I asked each to stop and report to me any unknown words/phrases they encountered, and explain what clarifying the word would help them to understand. This analysis includes data from 21 of the 22 readers.

The readers' explanations for why the words needed to be clarified fall into four general categories.

- A. The unknown word/phrase is the title, main idea and/or topic of the passage section
- B. The unknown word/phrase occurs frequently in the passage section
- C. Clarifying the unknown word/phrase will support understanding of a specific detail in the passage section
- D. Clarifying the unknown word/phrase may confirm a guessed meaning or hypothesis based on the reader's prior knowledge of the historical context of the passage section

I analyzed each passage section for the words/phrases reported as "clunks," and the rationale my readers gave for why the word/phrases would need to be clarified. For this analysis, I categorized the words the readers reported to me into the appropriate category for the 5-Potential Clunks. Table 8 organizes this information by passage section, the number of words reported and categorized as each of the 5-Potential Clunks, and the reason for clarification (see letter designation in the list above).

Table 6

Words reported to Clarify Organized by Type of “Clunk,” and Passage Section

America Adjusts to Peace (Introduction) 2 Readers, Comprehension Demand 1																			
Figurative Language				Proper Noun				Domain-Specific Vocabulary/Concept				Dictionary Words				Polysemous Words			
A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
		1				3				2				2				2	
The Red Scare 5 Readers, Comprehension Demand 1																			
Figurative Language				Proper Noun				Domain-Specific Vocabulary/Concept				Dictionary Words				Polysemous Words			
A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
				1		2				9				1	1		2	6	2
Women and African Americans Confront New Realities 4 Readers, Comprehension Demand 2																			
Figurative Language				Proper Noun				Domain-Specific Vocabulary/Concept				Dictionary Words				Polysemous Words			
A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
			1				2			1	2			4	1	rationale not prompted			
Inflation Leads to Labor Unrest 3 Readers, Comprehension Demand 3																			
Figurative Language				Proper Noun				Domain-Specific Vocabulary/Concept				Dictionary Words				Polysemous Words			
A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
								1		1				4	1				3
Flu Epidemic Grips the Nation 8 Readers, Comprehension Demand 3																			
Figurative Language				Proper Noun				Domain-Specific Vocabulary/Concept				Dictionary Words				Polysemous Words			
A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
			1			1		2		9	1			3					

Examples for each explanation follow. I selected these examples because they are typical of the data from the 21 readers.

Examples of the Explanation that the unknown word/phrase is the title, main idea and/or topic of the text section:

Reader Pat Richards

“We would need to clarify [**inflation**] because in the title of this paragraph, it says Inflation *Leads to Labor Unrest*, so inflation is like the main topic.” ~DS300055 p.2

Reader Walter Sanders

“[**Epidemic**] will help me understand the text because it’s in the title and when you read the title, it gives you a sense of the text, of what you will be reading in the text. It helps you know what happens in the text.” ~DS300068 p.1

Examples of the Explanation that the unknown word/phrase occurs frequently in the text section:

Reader Irene Brown

“I’d like to know what **radical** means, too, because it’s, that word appears in almost every single sentence which probably means that it’s important.” ~DS300057 p.1

Reader Caleb Butler

“**Radicals** appeared multiple times in this passage and a wave of fear of radicals. So, what are the radicals? Also, a broad offensive against the radicals. What are these radicals? Why do you need to attack them? Also, the police arrested, ‘thousands of people who were radicals.’ Okay, radicals appears again, so why did the police also arrest radicals?” ~DS300071 p.2

Examples of the Explanation that the clarification will support understanding of a specific detail(s) in the text section:

Reader Esther Cotton

“[The clarification of **influenza**] will help me because it says, ‘1918 influenza virus,’ so maybe it will help me understand what the virus was like, maybe. Because in the text it says that some historians believed that the virus came from the United States and then traveled around the world, so maybe influenza describes that.” ~DS300069 p.1

Reader Tony Wilson

“If you knew the word **anarchists** it would help you understand a little bit on radical and also help you understand what, no, why they were, why they were sent to jail, or why they exploded bombs. And for **radical**, if you knew the meaning of the word, it would help you understand also why they would explode bombs and why they were, why radical people would scare Americans.” ~DS300064 p.1

Examples of the Explanation that the clarification will confirm the guessed meaning or hypothesis based on prior knowledge of the historical context of the text section:

Reader Irene Brown

“I am guessing that, well, I’m guessing that **radical** means like, along the lines of some type of group looking for, in this context, political power. I think so because in the context they associate the word radical with words such as communists, revolution, and political. Well, the first two words, communist and revolution, they connect to political because, first of all communists, from what I’ve read, are a party with similar beliefs, slightly, like today we have Democrats and Republicans. And revolution, for example, the Revolutionary War, the Revolutionary War was in and of itself had to do with kind of overthrowing the British rule and this all leads back to the word political in terms of a sort of power or government.” ~DS300057 p.2

Reader Michell Calloni

“Well, first I’m going to go to **economic slowdown**. That doesn’t quite make sense because, well you can slow down economic, but you can’t slow it all the way down or you won’t have a functioning country. Because, there has to be some kind of money system. Because, you need economics to run a country, because if you don’t have a money system. Using the Revolutionary War as an example, the US was running out of money when it fought Britain, so it printed continentals, but continentals, they printed a lot of them, but not enough to have a functioning money system in the war, so the continentals were useless because nobody could use them anymore.” ~DS300070 p.1

In total, 72 words were reported for clarification. Readers provided reasons for seeking clarification. The vast majority of words/phrases (51) were clarified to support understanding of a specific detail in the passage section; 15 were clarified to confirm a guessed meaning; 4 were clarified because the word appeared in the title or was a main idea/topic; 2 were clarified because of the frequency the word appeared in the passage.

Research Question Identification: Are readers able to appropriately identify unknown words/phrases as one of the 5-Potential Clunks? What reasons do readers give for which of the 5-Potential Clunks the unknown word/phrase matches?

After a word/phrase was identified for clarification, I wanted to know which of the 5-Potential Clunks the reader believed the word/phrase fit, and why s/he thought so. This was important because in the instructional unit I taught my readers to use specific types of resources to clarify specific types of “clunks.” It was my assumption that an appropriate identification of the “clunk,” would lead the reader to using an appropriate resource for the clarification. I prompted 21 readers to tell me which of the 5-Potential Clunks s/he felt the reported word/phrase matched. Some readers used prior knowledge to match the word/phrase to the “clunk.” Others used a process of elimination to determine which of the 5-Potential Clunks word/phrase did not match. For a few readers, their identification of the “clunk,” showed confusions. What follows are examples for each rationale.

Examples of Rationale: Used Prior Knowledge for What Matched

Reader James Seiple

“I think [radicals] is probably definitely a polysemous word because, as I know, another meaning of radicals, which is like, the square root of something in math. So, considering there’s at least that definition and whatever definition they’re using here, or even more definitions, radicals should be a polysemous word because, polysemous words are words that have more than just one meaning.” ~DS300063 p.2

Reader Lavina Wright

“I don’t know the meaning yet, but I think [recession] is a domain specific word. I think it’s a domain specific word because recession is in the postwar recession, and I know it’s part of a competitive job market and when you’re talking about a competitive job market it’s usually talking about social studies. The economy or like, government, that part of social studies, or economic part of social studies. I think a postwar recession should be a domain specific content word because it is very small, and you can’t, it’s not biased and you can’t say it in two or more different ways it’s just postwar recession.” ~DS300060 p.2

Examples of Rationale: Process of Elimination

Reader Anna Ives

“I think [mutated], it’s a dictionary word because mutate, because... I’m going to start crossing off the other aspects of text. So, mutated definitely wouldn’t be a proper noun because it’s not capitalized, it wouldn’t be used as someone, because it wouldn’t be a name of a place or person or thing. And it wouldn’t be figurative language because mutated wouldn’t be something like, you wouldn’t know the definition until you learn it or something. And I don’t think it’s a polysemous word because I’ve only have heard, hearing mutated in a place like this one. So, if I read another passage mutated would only sometimes come up like a few times, it would only come up in a place where it was always dangerous where people didn’t like it and stuff. And I’m going to be thinking about if it is a dictionary word, so I’m not going to cross that off. I don’t think it’s a domain specific content and concept word, because it’s not a word that would fit into a domain such as literacy, math, social studies, science. Mutated, I think, is a dictionary word... It’s not a word that would fit into a domain [inaudible] such as literacy, math, social studies, science. So, mutated definitely would not go in math because you put it in the domain specific concept of math, domain of math, and then you put it there, and then you would never use it. I mean, if it was some kind of word like addition and subtraction you would use it in math sometimes, but if you put mutated in the domain of math, you would never use it. If it was in the domain of social studies, it wouldn’t be in there either, because you could, because in social studies you would be learning about history, economy, law or civics, and I think there was one more, but I don’t know what the last one is. I don’t think mutated fits into any of those categories. And it definitely wouldn’t fit into science because in science you usually learn about things that were studied such as living systems, mixtures and solutions, the rockets, space, and all those things that are outside of Earth. And it wouldn’t fit into any of those categories. Let’s say you put mutated into the category of mixtures and solutions, because, and I know from experience that when we did the mixtures and solutions, mutated never came up. I also know that if I put mutated into the domain of living systems, it never came up either. And, it definitely

won't come out in the domain of space. That's because in the domain of space, If I read about a book about space, I've also never heard mutated or read the word mutated in the book. I've read not only one of them, but a few of them, and then it never came out." ~DS300061 p.2

Reader Nate Page

"[**Reparations**] is not a proper noun, it's definitely not prior knowledge, it's not figurative language, it might be a dictionary word, and it might be a domain specific content or concept word. I think it's more of a dictionary word. Because, I don't know what domain or what concept reparations is, and I don't think reparations is a concept because right now, it's describing something that encouraged a strong desire for revenge in Germany. Well, it might be a concept, but mostly I don't, I just don't think it's a concept because it's hard to, because reparations, I just don't think it's a concept. I don't know, it's just a gut feeling, because it says, 'The harsh reparation imposed by the Allies encouraged a strong desire for revenge in Germany.' A reparation imposed by the Allies, if it was a concept, it could be something like really big." ~DS300067 p.3

Examples of Rationale: Confusions

Reader John Brown

"I think that **recession** is a domain specific content word. Because when you talk about a recession it usually happens after some damage or lots of people going to their jobs. Lots of people not going to their jobs. The difference between a domain specific content word and a domain specific concept word is that the content word is, is, a word that is related to a topic, and the domain specific concept word is the topic. A domain specific content word is like war, and it's like related to social studies. And social studies is the concept." ~DS300056 p.2

Reader Pat Richards

"I think [**inflation** is] a domain specific concept word because the concept of social studies... and it is after World War I. I know it's a concept word because it's a topic about the leads to labor unrest. The title is called 'Inflation Leads to Labor Unrest,' so the topic is labor unrest and inflation is part of it so it's part of the topic... It is a big idea because it was a problem in the war, and the war is a big idea." ~DS300055.mp3 p.3

After making their determination for which of the 5-Potential Clunks their identified unknown word/phrase matched, I asked 17 of the 21 readers to select one word/phrase they felt was the most important for understanding what the author of the passage section wanted them to know. I did not have this data for five of my readers; four readers' interviews were not recorded, and one reader's recording was unintentionally deleted. The 17 readers chose a resource(s) to clarify the meaning of this selected word/phrase, and then used information from the passage section to justify that their clarification fit the historical context. Table 9 compares my readers'

ability to appropriately identify which of the 5-Potential Clunks the unknown word/phrase matched, with the ability to use resources to make an appropriate clarification and justify that the clarification fit the historical context of the passage section.

Table 7

Appropriate Identification of Type of “Clunk” Compared to Appropriate Clarification and Justification

Reader	Passage Section Assigned and Comprehension Demand Rank	Appropriate Identification of 5-Potential Clunks (which “clunk” the unknown word/phrase matched)	Appropriate Clarification/Justification	Unknown Word	Reader Identification of “Clunk”	Identification of “Clunk” Taught in Intervention
Nate Page	America Adjusts to Peace (1)	No	Yes	Reparations	Dictionary	Domain-specific content word
Irene Brown	The Red Scare (1)	No	Yes	Radical	Domain-specific content word	Polysemous
Caleb Butler	The Red Scare (1)	No	Yes	Radical	Domain-specific content word	Polysemous
James Seiple	The Red Scare (1)	Yes	Yes	Radicals	Polysemous	Polysemous
Tony Wilson	The Red Scare (1)	No	Yes	Radical	Domain-specific concept word	Polysemous
Martha Long	The Red Scare (1)	Yes	Yes	The American Red Scare	Proper Noun	Proper Noun
John Brown	Women and African Americans Confront New Realities (2)	Yes	Yes	Recession	Domain-Specific content word	Domain-Specific Content word
Paul Bryant	Women and African Americans Confront New Realities (2)	Yes	Yes	Vied	Dictionary	Dictionary
Lavina Wright	Women and African Americans Confront New Realities (2)	Yes	Yes	Recession	Domain-Specific content word	Domain-specific content word
Michell Calloni	Women and African Americans Confront New Realities (2)	No Never Heard in Conversation so “no idea”	Yes	Vied	Never Heard in Conversation so no idea	Dictionary
Pat Richards	Inflation Leads to Labor Unrest (3)	Yes	Yes	Inflation	Domain-Specific concept word	Domain-specific content word
Esther Cotton	Flu Epidemic Grips the Nation (3)	No	Yes	Influenza	Dictionary	Domain-specific content word
Sophie Cline	Flu Epidemic Grips the Nation (3)	No	Yes	Influenza	Dictionary	Domain-specific content word
Anna Ives	Flu Epidemic Grips the Nation (3)	No	Yes	Mutated	Dictionary	Domain-specific content word
Molly Eller	Flu Epidemic Grips the Nation (3)	No	Yes	Influenza	Dictionary	Domain-specific content word
Larry Morris	Flu Epidemic Grips the Nation (3)	Yes	Yes	Influenza	Domain-Specific content word	Domain-specific content word
Walter Sanders	Flu Epidemic Grips the Nation (3)	No	Yes	Epidemic	Dictionary	Domain-specific content word

Of the 17 readers, seven appropriately identified the unknown word/phrase and appropriately clarified and justified the meaning. Ten readers did not make an appropriate identification, but did make an appropriate clarification and justification of the meaning. Next, I asked each reader to tell me what the clarification helped him/her to understand.

Analysis of Clarification and Justification

Research Question Clarification: In what ways do readers use resources to clarify the meaning of unknown words/phrases?

Research Question Justification: In what ways do readers fit the clarified meaning to the historical context of the text, and how does this justification influence comprehension of the text?

My data for my readers' clarification and justification of unknown words/phrases is quite extensive and rich. For this reason I decided to select three readers who read passage sections from each of the three levels of comprehension demand, and analyze their data as case studies. To select the readers, I analyzed transcriptions of the final assessment interviews and highlighted my prompting in orange. To minimize my effect on the results, I chose the interviews with less teacher-talk (orange highlighting) and more reader-talk. Of these interviews I selected the three readers who most clearly reported their thinking. If there were two or more readers who clearly articulated their thinking, I chose the interview I found to be more interesting.

Although it was my intention to select three readers for each level of comprehension demand, of the four readers for level 2, only two data sets were appropriate for analysis. In one reader's assessment, there was too much prompting from me to capture his independent thinking. The other reader's explanations were clearly his own thinking, but the interview was

several pages long. I decided not to use his data for purposes of brevity.

The analysis that follows provides evidence to answer both my research questions for clarification and justification. I also include my analysis for what each reader's clarification and justification helped him/her understand in the passage section. The eight case studies are organized by the passage section level of comprehension demand, most (1) to least (3). The first six cases are examples of readers who successfully made sense of the passage situation model. The final two cases are examples of readers who were unsuccessful in making sense of the passage situation model. All passage sections are represented across the eight case studies.

Reader James Seiple

James read *The Red Scare* (comprehension demand 1). He identified the unknown word, **radicals**, as a polysemous type of "clunk," and clarified it using a dictionary. Three definitions were offered in the dictionary. James determined that the first two definitions did not fit the historical context of the passage section because, "the other two definitions have to do with chemistry and math." He chose the third definition quoting the dictionary, "A person who advocates thorough or complete political or social reform, a member of a political party pursuing such aims." He then compared the dictionary definition with the information in the passage section, quoting three statements from the text, "Real revolutionary activity inside America," "... the fear of radicals and communists," and "... widespread fear of those thought to be plotting revolution within the United States."

Applying the dictionary definition to the information in the passage section, James made the interpretation that radical means, "basically, someone who wants the way their country is run to be run differently... considering these people want a revolution." To justify his interpretation, James used his prior knowledge of the American Revolution, saying the colonists didn't want the

British king to rule “over them,” so there was a revolution and “they ended up being a separate country.” Using his clarification of the unknown word, **radicals**, and combining the clarification with his prior knowledge of historical context, James understood that the radicals in the passage section were “people who were wanting to change it... so that America wasn’t run the way that it is.”

Reader Nate Page

Nate read *America Adjusts to Peace (introduction)* (comprehension demand 1). He identified the unknown word, **reparations**, as a dictionary word type of “clunk,” and clarified it using a dictionary. Nate felt that clarifying the word, reparations, would help him understand a specific detail of the text section, “...it would help me understand what imposed by the Allies encouraged a strong desire for revenge in Germany.” Nate read through the four definitions of reparations available in the dictionary, “A putting into good condition again, or being so repaired. A righting of a wrong. Something done or paid as a compensation for a wrong. The money or services paid by a defeated nation as compensation for a destruction or a loss it has inflicted.” Using his prior knowledge of historical context, Nate felt all but the first definition fit the passage section, “These all make sense except for the first one, because if it is putting into good condition again, before being repaired doesn’t make sense that it’s harsh. It doesn’t make sense that it’s harsh, because it says right here [quoting the text section] ‘the harsh reparations,’ and also because if they’re putting Germany into good shape it doesn’t explain why Germany wants revenge.” Nate felt the other three definitions of reparations fit the text section, explaining, “... we know that this is after World War I, so Germany was just defeated, so the definition ‘the money or services paid by a defeated nation as compensation for the destruction and loss that is inflicted,’ that makes sense.”

Using his clarification of the unknown word, reparations, and combining the clarification with his prior knowledge of historical context, Nate understood that the author's description of the reparations which encouraged revenge in Germany, was evidence for the author's claim. "The point the author's making, his or her claim, is that the end of World War I produced an unstable international world order."

Each of these readers used the clarification of unknown words/phrases, combined with prior knowledge of the context to further his/her understanding of the passage section s/he read. But for some readers, the clarification of an unknown word/phrase did not further his/her understanding of the passage section read. Examples are John Brown's and Pat Richard's experiences.

Reader Martha Long

Martha read *The Red Scare* (comprehension demand 1). She identified the unknown phrase, **The American Red Scare**, as a proper noun type of "clunk," and clarified it using a reference book, Encyclopedia of American Immigration (Bankston, 2010). She said that the encyclopedia was relevant, "...because [the passage section] says that the police arrested thousands of people, some who were radicals, and some who were simply immigrants from south and west Europe." Interpreting the meaning of this statement, Martha concluded, "...so some of these immigrants were falsely accused and they were arrested for being from Europe and police assumed they were radicals."

Martha used the index of the trade book, but did not find the phrase, *American Red Scare*, so she looked for the phrase, *European immigrants*, and found several listed categories under the topic. She selected a section with the heading, "Immigration, 1880-1924" (Ibid., p. 345). Using her prior knowledge of historical context, Martha explained that the Red Scare of 1919-1920 was

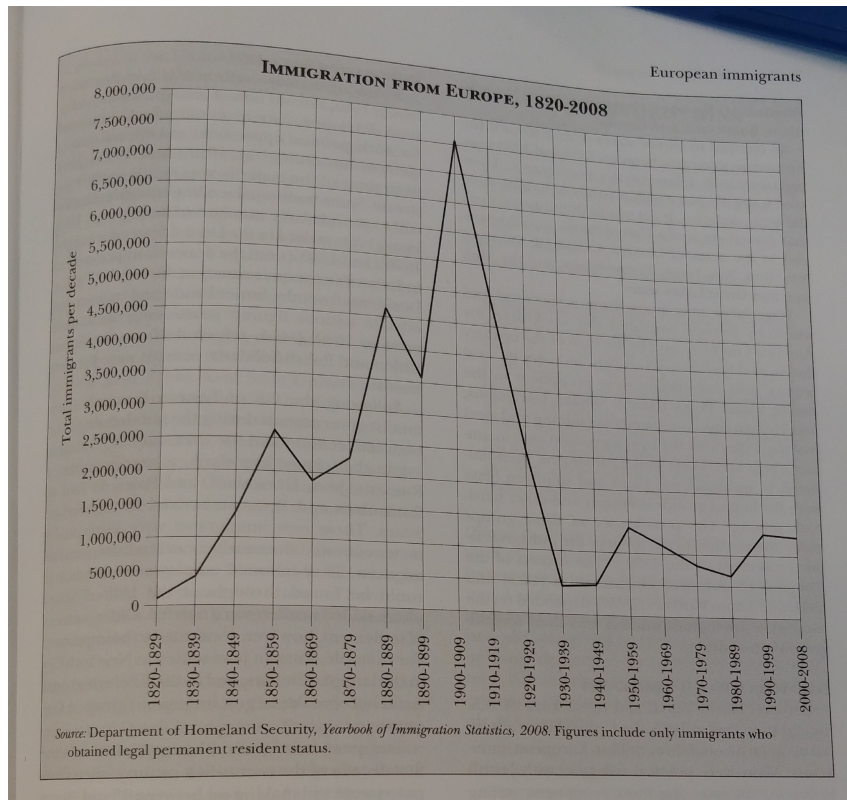
between 1880 and 1924, guessing that, "... it probably had a really large impact on immigration because the Red Scare might have made some European people think that immigrating to the United States wouldn't be safe because they might be jailed, or deported." To confirm her guess, Martha interpreted a graph included in the same encyclopedia section, titled, "Immigration from Europe, 1820 to 2008."

Interpreting two data points in the graph (see Figure 4) labeled, "1920-1919," and "1920-1929," Martha noted that the total immigrants per decade had a, "really sharp decrease," confirming her guess saying, "... that helps me to understand that some people, like I said before, some people might not feel safe coming to America because of the Red Scare. Also, in the years that followed, the [number of] immigrants from Europe didn't really rise, and the number of people didn't really rise anymore."

Using her clarification of the unknown phrase, The **American Red Scare**, and combining the clarification with her prior knowledge of historical context, Martha understood that "... from the year 1900 their [immigration] was at the top of the increase and then the really sharp decrease [of European immigrants coming to the United States] started, and it dropped to 2,500,000 people," could be a possible effect of the American Red Scare.

Figure 4

Graph: "Immigration from Europe, 1820-2008" from The Encyclopedia of American Immigration.



Reader Lavina Wright

Lavina read *Women and African Americans Confront New Realities* (comprehension demand 2). She identified the unknown phrase, **postwar recession**, as a domain-specific content type of “clunk,” and clarified it using the Internet. Lavina quoted information under the heading, “Post World War I Recession,” :

“The post World War I recession was an economic recession that hit most of the world in the aftermath of World War I. In many nations, especially the North America, this growth continued during World War I when nations mobilized their economies to fight the war in Europe. As the war ended, the global economy began to decline in the United States. 1918 through 1919 saw modest economic retreat, but the next year saw a mild recovery. [inaudible] the year it hit the United States. In 1920 and 1921 when the global economy saw very sharp [inaudible].”

Dissatisfied with the information she had just read, Lavina decided to search for the phrase, “postwar recession.” Lavina’s explanation for her dissatisfaction was that, “I know this doesn't really tell me much because it's (reference unclear) talking about a postwar recession and right

now it (reference unclear) only talks about an economic slowdown.” Reading the information from the newly searched web source heading, “Postwar Recession,” Lavina quoted:

“Most postwar recessions are caused by the disruption of the transition from war to peacetime production combined with the release of large numbers of people from the military into civilian life.”

After using multiple checks for understanding, Lavina said, “I get it now,” Lavina applied the information from her Internet search to the information in the text section, making the interpretation that “... a postwar recession is something that happens... after the war when the economy decreases and because the economy has spent so much money on trying to win the war against Germany.” Using her clarification of the unknown phrase, **postwar recession**, and combining the clarification with her prior knowledge of historical context, Lavina understood the impact of the recession on women and African Americans. Connecting her clarification to the title of the passage section, *Women and African Americans Confront New Realities*, she understood that women and African Americans were confronting the new reality because, “... not a lot of people have enough money and some people lose their jobs, and that’s a new reality.”

Reader Walter Sanders

Walter read *Flu Epidemic Grips the Nation* (comprehension demand 3). He identified the unknown word, **epidemic**, as a domain-specific content type of “clunk,” and clarified it using a dictionary. Walter’s purpose in clarifying epidemic was to confirm his guessed meaning of the word. Using his prior knowledge of the scientific context, he said, “I know some viruses can spread really easily so for the flu, I know it can spread really easily because it said that the flu spread like a wildfire. I knew that the flu is really bad and it can really, it can kill people.”

To clarify the word, he selected the dictionary definition quoting, “A disease that becomes widespread in a particular place and in a particular time”. Walter then matched the

definition to a specific detail in the text section saying, "... so, the clarification would be a disease that becomes widespread in a particular place in a particular time, because in the [passage section] it talks about the flu being a disease, and in this definition it talks about a disease... and my claim is that this is the same..." adding, "... [the dictionary and the passage section] both talk about diseases and in this [passage section] it talks about diseases and it also talks about the flu spreading with the wild fire, and in epidemic it says widespread and it also said it spreaded around the globe, and that's like a wide spread."

Using his clarification of the unknown word, **epidemic**, and combining the clarification with his prior knowledge of historical/scientific context, Walter confirmed his guessed meaning of the word and understood that "The author's point is to tell you that this flu was very deadly, it killed many lives and it was right after the war."

Reader Anna Ives

Anna read *Flu Epidemic Grips the Nation* (comprehension demand 3). She identified the unknown word, **mutated**, as a domain-specific content type of "clunk," and clarified it using a dictionary, the Internet, and a trade book. Using her prior knowledge of scientific context, Anna felt that clarifying the word would help her understand a specific text detail, saying, "...then I would know how the bird flu passed on to humans and then maybe I could know more about why the people's beliefs, how the people believed it would spread." She also used her interpretation of the picture and caption guessing that if she clarified the word, mutated, she could find out "... if that's one of the reasons why the streetcar conductor in Seattle wouldn't, was not allowing passengers inside the streetcar without a mask."

Anna selected the dictionary (dictionary source not identified in the recording of the informal assessment) definition, "Mutate, to undergo mutation," and paraphrasing said, "and the

definition of mutate is to part with something.” She matched the present verb tense used in the dictionary to the past tense of “mutated” used in the passage section making the interpretation that, “... if the suffix “ed” is used, is a past tense word, and mutate is to leave something, then if you put it together it would [sic] of something, if it left something already.” Anna justified the match between her clarification and the passage section saying, “I think it fits the text because it says that the influenza virus was originally with the bird and mutated to spread to humans. So [inaudible] mutated... so it could mean that the bird flu left the birds and instead, it spread to humans.” She then searched up “mutate” using the Internet (web source not cited in the recording of the informal assessment).

From the information in this Internet source, Anna determined that the definition of mutate as a reference to a cell undergoing a change in energy, did not fit the passage section, “I don’t think it actually changed, because it doesn’t have a cell, a DNA, or molecule in it.” Using her prior knowledge of the scientific context, she reasoned, “It’s because the bird flu is an illness and I don’t think an illness, first of all, has a cell, a DNA, or a molecule. It’s because I’ve never heard someone say an illness has some kind of gene in it.” Anna then used the Internet to search for the question, “Does an illness have a gene in it?” and did not find the answer. Turning to the trade books, she selected a book titled, The 1918 Influenza Pandemic (Peters, 2005).

Reading through a description of the symptoms of the flu, Anna kept looking for the answer to her question. After further reading, she paraphrased, “It says that the influenza virus would stick to a cell and it would reproduce on there, on the cell, and when the cell couldn’t hold the virus anymore the cell would burst open and it would spread the virus to other cells.”

Matching this description to the passage section, she said, “It helps me understand that maybe it

could have a cell in it because it attaches to a cell, and then it grows on a cell, so inside the virus maybe it's parts of cells. It also says the influenza was a virus that's changeable."

Using her clarification of the unknown word, **mutate**, and combining the clarification with her prior knowledge of the scientific context, Anna understood that when mutating, the bird flu changed, left the birds, and spread to humans.

Reader John Brown

John read *Women and African Americans Confront New Realities* (comprehension demand 2). This text section is included in appendix F, but because John refers to the text extensively, I've included the text below:

Women and African Americans made significant advances during the war. However, the end of the war also spelled the end of wartime economic opportunities for both groups. A postwar recession, or economic slowdown, created a competitive job market. By 1920, there were fewer women in the workforce than there had been in 1910.

In northern industrial cities, African American workers vied with returning soldiers for jobs and housing. During the hot summer of 1919, race riots erupted in cities throughout the country. The worst, in Chicago, was triggered by the drowning of a young black man by whites, and went on for 13 days. In 1921, violence erupted in Tulsa, Oklahoma, when armed African American men, many of them returning veterans, tried to protect a young black man from lynching. By the time the Tulsa race riots were over, at least 10 whites and 26 African Americans were dead. In one African American neighborhood, white rioters burned 35 city blocks to the ground (Leslie & Caldwell, 2017, p. 485).

John identified the unknown word, **recession**, as a domain specific content type of "clunk," and clarified it using a dictionary. He chose the third definition quoting, "a period of reduced economic activity," and compared it to the clarification offered in the passage section, "a postwar recession, or economic slowdown." John said, "Well, I guess [the dictionary definition] kinda means economic slowdown, but, it's an activity so it could be like growing was slowing down. So, I think it's pretty similar to an economic slowdown... because in the third definition in

the dictionary it said that it's a period of reduced economic activity, which means there's not much activity, but that means it's not active, so I think that means so it's slowing down."

When asked what this definition helped John to understand, he said, "I think what the author wants us to know, that the job market is decreasing so there were not many women working than before, like in the 1910s." John and I then engaged in a discussion:

Me: So why is that important?

John: It is important because it's what was happening during the war and after the war because there was so many... so many broken houses and a lot of teared things.

Me: A lot of what?

John: Teared things. Torn things.

Me: Where in the text does it tell you that?

John: Because it says that in African American neighborhoods, white rioters burned 35 city blocks to the ground.

Me: Why did they do that?

John: Because in Tulsa there was a race riot then, in not just that, it was throughout the country.

Me: What does that mean?

John: It's kinda like it means different people with different cultures or ya, cultures they are being discriminated and no not, and the whites were not liking their culture.

Me: Whose culture?

John: The blacks or the African Americans.

Me: So, what reasons did the author give you for why the riots happened?

John: It was because in Chicago it was triggered by drowning a black man by whites.

Me: So how does this relate to the recession?

John: It is related to recession because it triggered like, the country so then the whites are being harmful to the African Americans so they started burning down the houses when they burned down the houses they needed money to repair it which slowed down their economy, 'cause so

many people were losing their jobs. Then they needed money to repair it, so the blacks like, quitted their jobs or something, and that slowed down the economy.

Reader Pat Richards

Pat read *Inflation Leads to Labor Unrest* (comprehension demand 3). He identified the unknown word, **inflation**, as a domain specific concept type of “clunk,” and clarified it using a dictionary. Pat selected the definition, “an increase in the volume of money and credit related to the available goods and services, and the general rise in the price level.” He interpreted this definition to mean, “The rise, that the money and credit go higher for the available goods and services and continue rising in the general place of it. So, the money and credit to buy available goods and services is higher and [inaudible] and will continue rising in the general price level. The things of goods to buy them, it would become a higher amount of money so, and so it keeps going up until it reaches the general price level.” Putting the definition into his own words, Pat said, “Like, if you need to buy some food but then there's an inflation so you used to pay like five dollars, but then it would take like ten dollars.” Pat and I then engaged in a discussion:

Me: Okay, so now connect that to the text. How does inflation lead to labor unrest?

Pat: Because it says that after the conflict Americans rushed to buy consumer goods rather than war bonds.

Me: What does that mean?

Pat: Hmmm, they had to [inaudible] go to buy goods because they didn't have anything to eat, or there was a war because it was rising and so after the inflation stopped they had to go and get some food to eat, because it was cheaper, like the old price.

Me: Okay, so where in the text does it tell you that?

Pat: On the first paragraph on the second sentence. “After the conflict, Americans rushed to buy consumer goods rather than war bonds.”

Me: What does it mean, after the conflict?

Pat: What it means, after the conflict, it means after the inflation happened during the war.

DISCUSSION

Action research is interlaced with the goals of both the teacher and the researcher. Through my experiences as a teacher, I realized that the common teaching practices of activating and building prior knowledge *before reading*, and supporting small groups of readers in teacher-directed instruction *during reading*, did not provide adequate support for my students' ability to comprehend text. To determine the reasons behind why these common practices were insufficient, I became a researcher. Through my initial action research, I discovered that my students were not monitoring their comprehension for when meaning broke down, nor using appropriate "fix-up" strategies to clarify unknown words/phrases. It was at this point of discovery that my goal as a teacher and my goal as a researcher became one and the same; to create an instructional intervention (unit of instruction) to teach my students how to monitor for unknown words/phrases, identify which of 5 common potential "clunks" a word or phrase matched, and strategically use resources to clarify and justify that the unknown word/phrase fit the historical context of social studies informational text.

The unit of instruction was very enjoyable to facilitate as both the teacher and the researcher. My readers engaged in the activities with interest and they became passionate about their work with classmates to clarify text. For some readers, the passion turned into arguments, as other readers became leaders, guiding their group in their negotiation of the meaning of an unknown word or phrase. I was impressed with the depth of my readers' thinking and the ways they were able to articulate their side of the deliberation.

As the researcher, I appreciated the ways in which my readers were flexible in their learning. Throughout the unit of instruction we worked together to make modifications to our materials to support more specific understanding of how to identify, clarify and justify unknown

words/phrases. Through all-class and small group discussions of these modifications, my readers created a common language to articulate their thinking. This common language made my data more consistent, and clear, assisting me in my analysis.

This study gave me several unexpected insights into my readers' ability to monitor their comprehension. As I began my work interpreting these insights, I was reminded of my first year of teaching, when I had the opportunity to work with Regie Routman, a reading coach and author of several guides for teaching reading. In a personal conversation, Regie said something to me that I've returned to often throughout my teaching career, and my experiences as a researcher. Regie said that the word, assessment, means to "sit next to, and understand." Having sat next to my readers, what do I now understand?

Overall, my data show that teaching readers to monitor for unknown words/phrases may have an effect on their ability to comprehend social studies informational text. However, teaching readers to identify their unknown word/phrase as one of 5-Potential Clunks may have little effect on their comprehension. Strategic use of resources to clarify unknown words/phrases, and justify the clarification fits the text, does have an effect on understanding the textbase of a social studies informational passage, but may not have an effect on understanding the passage situation model.

Monitoring

All of my readers were able to monitor for unknown words/phrases, and all of my readers were able to report why the word/phrase would need to be clarified. When I designed the intervention, I anticipated that the three most reported reasons for clarification would be that the reader simply did not know the word/phrase, that the word/phrase was in the title, or that it occurred frequently in the text. My anticipation was based on my experience (typified in the

vignettes described at the beginning of this paper), with fourth-grade readers missing context clues and simply stating that a word is not known. It was also based on my knowledge that reading instruction in the lower grades often focuses on finding the main idea of a text, where students are taught to look at the title and the frequency of a word as clues for the main idea.

My findings are surprising because none of my readers reported that the word/phrase was simply unknown, and only five of the 72 unknown words/phrases were reported for frequency or because they were part of the title, topic or main idea. I was especially surprised by the finding that 92% of the reported reasons for clarification were to support understanding the meaning of a specific detail in the text, or to confirm a guessed meaning. This was unexpected because the tasks in the intervention did not explicitly teach my readers to look across the textbase and articulate what they believed clarification of an unknown word/phrase would help them to understand. This was a prompt only used in the final assessment of the study. Prompting the reader to articulate what the clarification would help him/her understand in the text, showed evidence about whether the reader was looking across the textbase to make meaning.

Identification

During the instructional unit, I emphasized that identifying the appropriate “clunk” would lead the reader to using the appropriate resource to clarify the unknown word/phrase. We practiced using encyclopedias, information on the Internet, and trade books to clarify proper nouns and domain-specific concept words. We used trade book indexes and glossaries to clarify domain-specific content words, and dictionaries to clarify “dictionary” and polysemous words.

My data show that neither the identification of the 5-Potential Clunks nor the use of resources in the way we practiced had an effect on whether the unknown word/phrase was appropriately clarified. Only two of the 17 readers evaluated in the final assessment did not

successfully clarify his unknown word: one appropriately identified his “clunk,” and one did not. Fifteen of the readers successfully clarified their unknown word/phrase even when the unknown word/phrase was not appropriately identified, and/or a resource was used in a way we had not practiced. Twelve of the 17 readers mis-identified domain-specific content, domain-specific concept, polysemous and “dictionary” words, and all used a dictionary to appropriately clarify their words. These data show that a dictionary can be a useful resource for all but the proper noun type of “clunk.”

If identification of the unknown word/phrase based on the 5-Potential Clunks had no effect on the clarification, what may account for the success of my readers to justify their clarifications fit the historical context of their passage section?

Clarification and Justification

My greatest insights about the ability of my readers to clarify and justify unknown words/phrases, come from my final assessment interviews, and the eight case studies that showcase this ability. During the interviews I was overwhelmed by each reader’s care in justifying the fit of the clarification to the context of their passage section. With the purpose of using the possible clarification to confirm a guessed meaning, or to understand a specific detail in the passage section, each of the eight readers in the case studies took information from their selected resource and strategically compared possible clarifications (i.e., different definitions found in a dictionary), to the information in the passage textbase. As they engaged in this pursuit, they articulated their reasons for whether the possible clarification fit; in some cases, going through the possible clarifications one-by-one. Their reasoning involved using prior knowledge, new knowledge from the resource, and information in the textbase, together, to make inferences that successfully supported their understanding of the passage situation model. Considering that

the identification of the “clunk,” and the particular resource each reader used had little effect on their clarifications and justifications, perhaps the process itself, of justifying the fit of the clarification, may have had the greatest effect on each reader’s ability to comprehend their passage section.

To test my hypothesis, I looked at the interviews for the two readers whose comprehension of their passage was unsuccessful: John Brown and Pat Richards. In both cases the reader strategically used his selected resource to make an appropriate clarification of his unknown word, and then appropriately justified that the clarification fit the passage textbase. Yet, each reader was unsuccessful in comprehending the situation model of his passage section. The other six readers were successful in using the clarified textbase to understand the situation model. What may explain why John and Pat were unsuccessful?

Using new knowledge from the resource and information in the passage textbase, John appropriately understood that a recession caused an economic slowdown in which the job market decreased. I asked John why the decrease in jobs was important information in the passage, and he described the Tulsa Race Riot. When I asked him how the Tulsa Race Riot related to the recession, John used his prior knowledge of racial discrimination to inaccurately interpret that the Tulsa Race Riot slowed down the economy causing the recession, “[The Tulsa Race Riot] is related to recession because it triggered like, the country so then the whites are being harmful to the African Americans so they started burning down the houses when they burned down the houses they needed money to repair it which slowed down their economy, ‘cause so many people were losing their jobs. Then they needed money to repair it, so the blacks like, quitted their jobs or something, and that slowed down the economy.

John was able to take new knowledge from a resource, and information from the textbase to appropriately clarify and justify the meaning of the word, recession, but when he applied his prior knowledge of racial discrimination to the information in the textbase, he was not successful in making the inferences needed to understand the situation model of the passage, which is that the recession contributed to the riot.

Pat Richards used new knowledge from his resource, information in the passage textbase, and his prior knowledge of the rising cost of food, to appropriately clarify and justify the meaning of his unknown word, inflation. When asked how inflation lead to labor unrest (the title of the passage section), Pat quoted the sentence, “After the conflict Americans rushed to buy consumer goods rather than war bonds.” When asked what that means, he stated, “... they had to [inaudible] go to buy goods because they didn't have anything to eat, or there was a war because it was rising. And so, after the inflation stopped, they had to go and get some food to eat, because it was cheaper, like the old price.” In Pat’s case he appropriately used his prior knowledge, new knowledge from the resource, and information in the passage textbase to make meaning of the word, inflation, but became confused when applying this meaning to the situation model of the passage.

John and Pat’s case studies do not support my hypothesis that the process, itself, of clarifying and justifying an unknown word/phrase explains how readers make sense of the situation model of a social studies informational text. The process may support some readers, and not others.

CONCLUSIONS

I believe the findings in this study show that the successful comprehension of social studies informational text passages may be supported by:

- The reader's ability to monitor for unknown words/phrases
- The reader's ability to strategically use a resource to clarify the passage textbase
- The reader's ability to use prior knowledge, new knowledge from a resource, and information from the passage textbase to understand the passage situation model.

With the exception of proper nouns, the findings in this study do not indicate an effect for identifying which of the 5-Potential Clunks an unknown word/phrase matches, nor the type of resource used for clarification.

LIMITATIONS

There are many challenges to action research, not the least of which is the fact that instruction in any context is a moving target. During the intervention, the instructional objectives, materials, and the design of the tasks, were in flux as I responded to the learning needs of my students. Also, I was obligated to design the final assessment so that I had evidence of my students' ability to meet Common Core State Standards as well as evidence for my study questions.

As a researcher I needed the conditions of the final assessment interview to be as consistent as possible, and with each interview I attempted to use the same prompting for my readers' identification, clarification and justification of unknown words and phrases. However, as a teacher, every moment is a "teachable" moment, and in some interviews my prompting went off script. I did not analyze the effect of my prompting during the interviews, but I understand that it most likely did influence the ways in which my readers articulated their thinking.

Another likely influence was my assignment of the passage sections from *America Adjusts to Peace*. I assigned the passage sections based on my anticipation of the level of comprehension demand, which, in some ways is similar to a teacher anticipating the amount of background knowledge and vocabulary a reader would need to access a text. But, unlike activating and building prior knowledge in a pre-teaching approach, where, as I've argued, the teacher is essentially reading the text for their readers, I differentiated the assignment of the passage sections based on matching what I perceived the access points in each text would be, with the skills of my individual readers. Instead of pre-teaching vocabulary, I taught my readers how to identify, clarify, and justify unknown words/phrases for themselves.

IMPLICATIONS

The readers in this study were fourth-grade multi-language students in a gifted program, skilled at reading well above grade level. Future studies could include general education and multi-language students reading at or below grade level, and students with individualized education plans for reading. With four weeks of targeted instruction, my readers showed progress in their ability to self-monitor and use “fix-up” strategies to comprehend social studies texts. Longer instructional units for comprehension monitoring could be integrated into commonly used approaches for teaching reading, using materials readily available to teachers.

My intervention and the final assessment may add to the body of reading assessments teachers commonly use. The reading assessments I've typically facilitated, such as the Qualitative Reading Inventory (Leslie & Caldwell, 2017), The Benchmark Assessment System (Fountas & Pinnell, 2010), and standardized state tests, evaluate a reader's fluency, retelling of information read, and answers to implicit and explicit comprehension questions. Evaluations of

these skills are important for understanding *whether* a reader is comprehending text, but give little insight into *how* the reader is making sense of text. By studying how my readers identified, clarified and justified unknown words/phrases, I understood how my readers make sense of the textbase and situation model of social studies informational texts.

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APPENDICES

Appendix A Word in Context and Activity Card

5

organize

Only after their chores were done could colonial children set up, or **organize**, games.



5

organize

What Does It Mean?

To **organize** is to arrange things according to a system.

Spanish cognate: organizar

Think About It.

How do you like to **organize** your clothing?

Talk It Over.

How would you **organize** the items below? Discuss them with a partner. You may **organize** some of them in more than one way. Copy the chart and fill it in.

Items	How to Organize
library books	
socks	
animals in a zoo	
coins	
children	

Appendix B
Marzano Vocabulary Organizer (modified)

Word:	Sketch of the Word
What I think the word means:	
Why I think this is what the word means:	
Final meaning (negotiated with class)	
The word in a sentence that shows the meaning:	

Appendix C
Organizer for Identifying, Clarifying and Justifying
Unknown Words and/or Phrases

Word or Phrase	Type of “Clunk”: ☐ Figurative language ☐ Proper Noun ☐ Domain-specific content/concept ☐ Dictionary Word ☐ Polysemous Word	Resource for Clarification: ☐ Trade book ☐ Textbook ☐ Encyclopedia ☐ Dictionary ☐ Internet	Clarification (What the word/phrase means)	Justification What evidence from your prior knowledge and the text helps you to know this is the appropriate meaning?

Appendix D
***America Adjusts to Peace* Passage Sections Analyzed for 5-Potential Clunks**

Tables for passage sections are organized in the order in which they appear in *America Adjusts to Peace*.

Level & Name of Passage	High School America Adjusts to Peace (Introduction)
Figurative Language	• Meanwhile, Lenin’s Soviet Russia threatened revolution throughout the industrial world. • In the United States, the horrors of the war along with widespread fear of communists and radicals led Americans to question their political, if not their economic, role in the world.
Proper Nouns incl. Historical Figures & Events	• The end of World War I produced an unstable international order. • The loss of territory and the harsh reparations imposed by the Allies encouraged a strong desire for revenge in Germany. • Meanwhile, Lenin’s Soviet Russia threatened revolution throughout the industrial world. • In the United States, the horrors of the war along with widespread fear of communists and radicals led Americans to question their political, if not their economic, role in the world.
Domain-Specific Content & Concept Words	• The end of World War I produced an unstable international order. • The loss of territory and the harsh reparations imposed by the Allies encouraged a strong desire for revenge in Germany. • Meanwhile, Lenin’s Soviet Russia threatened revolution throughout the industrial world. • political, if not their economic, role in the world. • World War I produced significant economic, social, political, and cultural changes in America and throughout the world.
Dictionary Words (unknown Tier II Words)	• The end of World War I produced an unstable international order. • The loss of territory and the harsh reparations imposed by the Allies encouraged a strong desire for revenge in Germany. •
Polysemous Words	• In the United States, the horrors of the war along with widespread fear of communists and radicals led Americans to question their political, if not their economic, role in the world.

Level & Name of Passage	High School America Adjusts to Peace Flu Epidemic Grips the Nation
Figurative Language	- The movement from war to peace would have been difficult even in the best of times. - Once the virus began, it spread like a wildfire and killed millions worldwide like a predator feasting on its prey. - The great influenza pandemic, coming on the heels of the Great War, gave a sense of doom and dread to people around the globe.
Proper Nouns incl. Historical Figures & Events	The great influenza pandemic, coming on the heels of the Great War, gave a sense of doom and dread to people around the globe.
Domain-Specific Content & Concept Words	- The movement from war to peace would have been difficult even in the best of times. - Research in recent years shows that the 1918 influenza virus was originally a bird flu that mutated to spread to humans. - The great influenza pandemic, coming on the heels of the Great War, gave a sense of doom and dread to people around the globe.
Dictionary Words (unknown Tier II Words)	- The movement from war to peace would have been difficult even in the best of times. - In September 1918, an unusually deadly form of the influenza, or flu, virus appeared. - Once the virus began, it spread like a wildfire and killed millions worldwide like a predator feasting on its prey.
Polysemous Words	Street car conductor in Seattle not allowing passengers aboard without a mask.

Level & Name of Passage	High School America Adjusts to Peace Women and African Americans Confront New Realities
Figurative Language	- However, the end of the war also spelled the end of wartime economic opportunities for both groups. - A postwar recession, or economic slowdown, created a competitive job market. - In 1921, violence erupted in Tulsa, Oklahoma, when armed African American men, many of them returning veterans, tried to protect a young black man from lynching.
Proper Nouns incl. Historical Figures & Events	- Women and African Americans made significant advances during the war. - The worst, in Chicago, was triggered by the drowning of a young black man by whites, and went on for 13 days. - In 1921, violence erupted in Tulsa, Oklahoma, when armed African American men, many of them returning veterans, tried to protect a young black man from lynching.

Domain-Specific Content & Concept Words	• However, the end of the war also spelled the end of wartime economic opportunities for both groups. • A postwar recession, or economic slowdown, created a competitive job market. • In northern industrial cities, African American workers vied with returning soldiers for jobs and housing. • During the hot summer of 1919, race riots erupted in cities throughout the country. • In 1921, violence erupted in Tulsa, Oklahoma, when armed African American men, many of them returning veterans, tried to protect a young black man from lynching.
Dictionary Words (unknown Tier II Words)	• In northern industrial cities, African American workers vied with returning soldiers for jobs and housing. • The worst, in Chicago, was triggered by the drowning of a young black man by whites, and went on for 13 days. • Women and African Americans made significant advances during the war. • However, the end of the war also spelled the end of wartime economic opportunities for both groups. • A postwar recession, or economic slowdown, created a competitive job market. • In northern industrial cities, African American workers vied with returning soldiers for jobs and housing. •
Polysemous Words	• A postwar recession, or economic slowdown, created a competitive job market. • During the hot summer of 1919, race riots erupted in cities throughout the country. • In 1921, violence erupted in Tulsa, Oklahoma, when armed African American men, many of them returning veterans, tried to protect a young black man from lynching.

Level & Name of Passage	High School America Adjusts to Peace Inflation Leads to Labor Unrest
Figurative Language	• During the war, inflation, or rising prices, had been held in check. • After the war, prices fell sharply, making it difficult for farmers to pay their mortgages or buy what they needed for the next growing season. • Industrial workers also felt the pain of inflation when their wages did not by as much as they had during the war.
Proper Nouns incl.	• After the conflict, Americans rushed to buy consumer goods rather than war bonds.

Historical Figures & Events	In Boston, even the police force struck.
Domain-Specific Content & Concept Words	- During the war, inflation, or rising prices, had been held in check. - After the conflict, Americans rushed to buy consumer goods rather than war bonds. - During the war, the price of corn, wheat, cotton, cattle, and other agricultural goods had risen, encouraged by the president's policies. - After the war, prices fell sharply, making it difficult for farmers to pay their mortgages or buy what they needed for the next growing season. Industrial workers also felt the pain of inflation when their wages did not by as much as they had during the war. - In 1919, more than 4 million workers or 20 percent of the workforce, went on strike at one time or another. - Demanding rewards for their wartime patriotism, workers struck for higher wages and shorter workdays. - In Boston, even the police force struck. - When some strikes turned violent, the pro-management press blamed the presence of radicals among the strike leaders.
Dictionary Words (unknown Tier II Words)	- The scarcity of these goods, coupled with widespread demand, caused inflation. - After the war, prices fell sharply, making it difficult for farmers to pay their mortgages or buy what they needed for the next growing season. - When some strikes turned violent, the pro-management press blamed the presence of radicals among the strike leaders.
Polysemous Words	- During the war, inflation, or rising prices, had been held in check. - After the conflict, Americans rushed to buy consumer goods rather than war bonds. - In 1919, more than 4 million workers or 20 percent of the workforce, went on strike at one time or another. - In Boston, even the police force struck.

Level & Name of Passage	High School America Adjusts to Peace The Red Scare
Figurative Language	- The reaction against Labor was partly spurred by a wave of fear of radicals and communists. - Revolutionary activity abroad, coupled with strikes across the United States, prompted the first American Red Scare, a wave of widespread fear of those thought to be plotting revolution within the United States. - To many, these actions seemed to attack the liberties that Americans held most dear.

Proper Nouns incl. Historical Figures & Events	• The reaction against Labor was partly spurred by a wave of fear of radicals and communists. • Revolutionary activity abroad, coupled with strikes across the United States, prompted the first American Red Scare, a wave of widespread fear of those thought to be plotting revolution within the United States. • Suspected anarchists, members of a radical political movement, exploded bombs in cities across America. • Police arrested thousands of people, some who were radicals and some who were simply immigrants from southern or Eastern Europe. • To many, these actions seemed to attack the liberties that Americans held most dear.
Domain-Specific Terms & Concepts	• The reaction against Labor was partly spurred by a wave of fear of radicals and communists. • Revolutionary activity abroad, coupled with strikes across the United States, prompted the first American Red Scare, a wave of widespread fear of those thought to be plotting revolution within the United States. • Authorities discovered bombs mailed to important industrialists and government officials. • Suspected anarchists, members of a radical political movement, exploded bombs in cities across America. • Police arrested thousands of people, some who were radicals and some who were simply immigrants from southern or Eastern Europe. • Most were never charged or tried for a crime. • The government then deported hundreds of radicals. • To many, these actions seemed to attack the liberties that Americans held most dear.
Dictionary Words (unknown Tier II Words)	• Police arrested thousands of people, some who were radicals and some who were simply immigrants from southern or Eastern Europe.
Polysemous Words	• The reaction against Labor was partly spurred by a wave of fear of radicals and communists. • Revolutionary activity abroad, coupled with strikes across the United States, prompted the first American Red Scare, a wave of widespread fear of those thought to be plotting revolution within the United States. • Suspected anarchists, members of a radical political movement, exploded bombs in cities across America. • Most were never charged or tried for a crime.

Appendix E
Full Analysis for Comprehension Demand: *America Adjusts to Peace (Introduction),*
And Flu Epidemic Grips the Nation

America Adjusts to Peace

The end of World War I produced an unstable international order. The loss of territory and the harsh reparations imposed by the Allies encouraged a strong desire for revenge in Germany. Meanwhile, Lenin's Soviet Russia threatened revolution throughout the industrial world. In the United States, the horrors of the war along with widespread fear of communists and radicals led Americans to question their political, if not their economic, role in the world.

World War I produced significant economic, social, political, and cultural changes in America and throughout the world. This led to important, occasionally painful, adjustments.

America Adjusts to Peace (introduction) (96 words) Comprehension Demand 1	
Clarifying Clauses	None
Anticipated Prior Knowledge of Historical Content & Context	• Russia threatening revolution • The horrors of the war • Fear • Cultural changes
Anticipated Lack of Prior Knowledge of Historical Content & Context	• Unstable international order • Lenin's Soviet Russia • America's political and economic role in the world
Anticipated Familiarity with Domain-Specific Content and Concept Words	• International • Territory • Revolution • War • Political • Economic

	• Cultural
Anticipated <i>Unfamiliarity</i> with Domain-Specific Content and Concept Words	• Reparations • Allies • Soviet • Communists • Radicals • Social
Analysis	• No clarifying clauses • Predicted lack of prior knowledge involves large historical and political ideas • The predicted familiar domain-specific words do little to support understanding of the predicted unfamiliar words • Comparatively fewer number of words (96) providing less context

America Adjusts to Peace (introduction) has no clarifying clauses to aid the reader in understanding any of the introduced ideas. My predictions for the reader's prior knowledge of historical content and context included: Russia threatening revolution, the horrors of war, fear, and cultural changes. My predictions were based on my knowledge that typically, fourth graders know that Russia is a country, and several of the students had participated in our school-wide geography "Passport Club." In addition, as a part of their reading assessment, 11 of the readers read the World War I passage in the QRI-6, which discusses Russia's involvement in the war. The concepts of war and fear are typically understood by fourth graders through their experiences watching television, movies, and playing video games. For some, the experience is more personal because their parents immigrated to the United States to avoid war in their home country.

My predictions for the reader's lack of prior knowledge of historical content and context included larger sophisticated concepts: unstable international order, Lenin's Soviet Russia, and America's political and economic role in the world. While I would expect fourth-grade readers to understand many of these terms out of context (unstable, international, political, economic), within context the concepts of an order that is unstable and international; Russia as defined by

Lenin and Soviet; and America's world role; are, in my experience, too sophisticated for a fourth grader to understand perhaps even with explicit instruction. Because of this, I felt that my predictions for the reader's prior knowledge would not support understanding of the predictions for the reader's lack of prior knowledge.

My predictions for the domain-specific content and concept words readers would find familiar, I believed, would do little to support the words I predicted would be unfamiliar. For example, though I predicted readers would be familiar with the phrase, "loss of territory," this understanding would not support comprehension of the predicted unfamiliar phrase, "harsh reparation." Predicted familiar terms: political, economic, and cultural, would do little to support the comprehension of Allies, Communists, radicals and social. Finally, the text section is 96 words, fewer words, as compared to the other text sections, to provide context that may aid in understanding unknown words/phrases.

Flu Epidemic Grips the Nation

The movement from war to peace would have been difficult even in the best of times. But the end of 1918 and 1919 were not the best of times. In September 1918, an unusually deadly form of the influenza, or flu, virus appeared. Research in recent years shows that the 1918 influenza virus was originally a bird flu that **mutated** to spread to humans. Many historians now believe that the virus originated in the United States, then traveled around the world. Once the virus began, it spread like a wildfire and killed millions worldwide like a predator feasting on its prey. The great influenza pandemic, coming on the heels of the Great War, gave a sense of doom and dread to people around the globe.

Street car conductor in Seattle not allowing passengers aboard without a mask. 1918.

National Archives and Records Administration



Flu Epidemic Grips the Nation (138 words) Comprehension Demand 3

Clarifying Clauses	• Influenza, or flu • Picture with caption
Anticipated Prior Knowledge of Historical Content & Context	• Movement from war to peace would have been difficult even in the best of times • An unusually deadly form of Influenza • Research • Historians • United States • Traveled around the world • It spread like a wildfire and killed millions worldwide like a predator feasting on its prey • Doom and Dread
Anticipated Lack of Prior Knowledge of	• The Great War

Historical Content & Context	
Anticipated Familiarity with Domain-Specific Content and Concept Words	• War • Peace • Virus • Predator • Prey
Anticipated Unfamiliarity with Domain-Specific Content and Concept Words	• Influenza • Mutated • Pandemic
Analysis	• The main topic is clarified • Picture with caption aids in understanding the severity of the pandemic • Only one historical concept is predicted as unfamiliar • The predicted familiar domain-specific words support understanding of the predicted unfamiliar words • Comparatively more number of words (138) providing more context

The third sentence in *Flu Epidemic Grips the Nation* has a clarifying clause for the main topic of the section, “influenza, or flu.” In addition to this clarifying clause, the section has a picture with a caption that supports the main idea of the severity of the epidemic. The picture and caption show a street car conductor requiring passengers to wear a protective face mask. The caption also allows for the readers to make a personal connection as the picture was taken in Seattle. My predictions for the reader’s prior knowledge of historical content and context included nearly all of the main ideas such as: the movement from war to peace, research, historians, the figurative language, “it spread like a wildfire and killed millions like a predator feasting on its prey.” Fourth-grade readers typically know that peace follows a war, they have participated in several research projects in their school career, and as their teacher I often emphasized the work of historians. The figurative language paints a picture very relatable to fourth-grade readers, of an illness that spreads without mercy as quickly and unpredictably as a wildfire, and with a death as final as a predator eating its prey. The air quality of the Seattle

region is impacted by wildfires in California, Canada, and across Washington State. As for predators eating prey, this is a topic studied in a variety of ways in the lower grades in our school district.

My predictions for the reader's lack of prior knowledge of historical content and context only included World War I named as the Great War. Because this is a proper noun, readers may not have understood that this is also the name of World War I. In addition, while most fourth graders are familiar with World War II, few know details about World War I.

My predictions for the domain-specific content and concept words reader's would find familiar could support comprehension of the predicted words and phrases I predicted as unfamiliar. For example, the term, "virus," as a descriptor of influenza, would be familiar to any reader who has had a cold virus. The familiarity of a predator killing "millions worldwide," could aid the reader in understanding that this worldwide spread of the virus could be referred to as a pandemic. Compared to the *America Adjusts to Peace (introduction)* section, *Flu Epidemic Grips the Nation*, has 138 words, to provide context that may aid in understanding unknown words/phrases.

Appendix F
Brief Analysis for Comprehension Demand: *The Red Scare, Women and African Americans Confront New Realities, and Inflation Leads to Labor Unrest*

The Red Scare

The reaction against labor was partly spurred by a wave of fear of radicals and communists. Revolutionary activity abroad, coupled with strikes across the United States, prompted the first American Red Scare, a wave of widespread fear of those thought to be plotting revolution within the United States. Real revolutionary activity inside America gave substance to the scare. Authorities discovered bombs mailed to important industrialists and government officials. Suspected anarchists, members of a radical political movement, exploded bombs in cities across America.

A broad offensive against radicals in the United States occurred in 1919 and 1920. Police arrested thousands of people, some who were radicals and some who were simply immigrants from southern or Eastern Europe. Most were never charged or tried for a crime. The government then deported hundreds of radicals. To many, these actions seemed to attack the liberties that Americans held most dear.

The Red Scare (146 words) Comprehension Demand 1	
Clarifying Clauses	The first America Red Scare, a wave of widespread fear of those thought to be plotting revolution within the United States
Anticipated Prior Knowledge of Historical Content & Context	Deported Immigrants
Anticipated Lack of Prior Knowledge of Historical Content & Context	- Revolutionary activity abroad - Revolutionary activity within the United States - A broad offensive
Predicted Familiarity with Domain-Specific Content and Concept Words	- Reaction - Coupled with - Strikes - Prompted

	• Plotting • Political movement • Charged • Tried • Arrested • Government Officials • Bombs • Police • Immigrants • Liberties
Predicted <i>Unfamiliarity</i> with Domain- Specific Content and Concept Words	• Labor • Radicals • Communists • Anarchists • Authorities • Industrialists • Substance
Analysis	• Main topic is clarified • Very little predicted prior knowledge, idea that is predicted does not support understanding of main ideas • Predicted lack of prior knowledge is critical for understanding passage • Predicted familiarity with domain-specific words/phrases does provide context for understanding predicted unfamiliar words/phrases, although the distinction between radicals, communists, and anarchists cannot be discerned from context • Comparatively more number of words (146) providing more context

Women and African Americans Confront New Realities

Women and African Americans made significant advances during the war. However, the end of the war also spelled the end of wartime economic opportunities for both groups. A postwar recession, or economic slowdown, created a competitive job market. By 1920, there were fewer women in the workforce than there had been in 1910.

In northern industrial cities, African American workers vied with returning soldiers for jobs and housing. During the hot summer of 1919, race riots erupted in cities throughout the country. The worst, in Chicago, was triggered by the drowning of a young black man by whites, and went on for 13 days. In 1921, violence erupted in Tulsa, Oklahoma, when armed African American men, many of them returning veterans, tried to protect a young black man from lynching. By the time the Tulsa race riots were over, at least 10 whites and 26 African Americans were dead. In one African American neighborhood, white rioters burned 35 city blocks to the ground.

Women and African Americans Confront New Realities (163 words) Comprehension Demand 2

Clarifying Clauses	• A postwar recession, or economic slowdown
Anticipated Prior Knowledge of Historical Content & Context	• Competitive job market • Wartime economic opportunities • Lynching • Burned city blocks to the ground • Relationship between African Americans and whites
Anticipated <i>Lack</i> of Prior Knowledge of Historical Content & Context	• Women and African Americans made significant advances during the war • Race riots
Anticipated Familiarity with Domain-Specific Content and Concept Words	• Workforce • Industrial • Women • African American • Soldiers • Jobs, labor • Housing • Drowning • Lynching • Black man • Whites

	• Violence
Anticipated <i>Unfamiliarity</i> with Domain-Specific Content and Concept Words	• Recession • Veterans • Riots
Analysis	• Recession is clarified • Predicted prior knowledge for several main ideas • Predicted lack of prior knowledge for only one main idea, significant advances, and race riots could be understood from context • Predicted familiarity with several domain-specific words/phrases • Predicted unfamiliarity with three domain-specific words/phrases, one clarified and one can be understood from context • Comparatively more number of words (163) providing more context

Inflation Leads to Labor Unrest

During the war, inflation, or rising prices, had been held in check. After the conflict, Americans rushed to buy consumer goods rather than war bonds. The scarcity of these goods, coupled with widespread demand, caused inflation. During the war, the price of corn, wheat, cotton, cattle, and other agricultural goods had risen, encouraged by the president's policies. After the war, prices fell sharply, making it difficult for farmers to pay their mortgages or buy what they needed for the next growing season. This began a long period of tough times for farmers.

Industrial workers also felt the pain of inflation when their wages did not buy as much as they had during the war. In 1919, more than 4 million workers or 20 percent of the workforce, went on strike at one time or another. Demanding rewards for their wartime patriotism, workers struck for higher wages and shorter workdays. In Boston, even the police force struck. The workers won some of the strikes, but they lost far more. When some strikes turned violent, the pro-management press blamed the presence of radicals among the strike leaders.

Inflation Leads to Labor Unrest (96 words) Comprehension Demand 3	
Clarifying Clauses	• Inflation, or rising prices
Anticipated Prior Knowledge of Historical Content & Context	• War • Rising prices • Buying consumer goods • Wartime patriotism • Prices fell sharply • Growing Season • Period of tough times for farmers • Higher wages and shorter workdays
Anticipated <i>Lack</i> of Prior Knowledge of Historical Content & Context	• Scarcity of goods coupled with widespread demand • Industrial workers • Pro-management press
Anticipated Familiarity with Domain-Specific Content and Concept Words	• Agriculture • Price • Corn, wheat, cotton, cattle, agricultural goods • The president • Farmers • Strikes • Police force
Anticipated <i>Unfamiliarity</i> with Domain-Specific Content and Concept Words	• War bonds • Inflation • Policies • Mortgages • Radicals
Analysis	• Inflation is clarified • Predicted prior knowledge for several main ideas • Predicted lack of prior knowledge for three main ideas, scarcity of goods could be understood from context • Predicted familiarity with several domain-specific words/phrases • Predicted unfamiliarity with several domain-specific words/phrases, that could not be understood from context • Comparatively fewer number of words (96) providing less context

