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Sparking Metacognition: Contextualizing Reading Strategies

for Low-Proficient ESL Readers

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A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Arts

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ABSTRACT

Sparking Metacognition: Contextualizing Reading Strategies
for Low-Proficient ESL Readers

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Reading strategies are consciously controlled actions learners execute in order to aid comprehension. The effectiveness of strategies is increased with metacognitive awareness. Researchers have created instruments to raise metacognitive awareness targeted for native and highly proficient L2 readers. This article outlines the creation of a new survey, the Contextualized Inventory of Metacognitive Awareness for novice to low-intermediate L2 readers. Unlike other instruments, this survey contextualizes pre-, during-, and post-reading strategy deployment with the use of simplified, narrative reading passages. The survey was piloted at an Intensive English Program with 88 subjects. The overall readability of the survey had a Lexile score of 350L and a Coh-Metrix score of 35. The initial reliability of the survey was .69. Pedagogical uses and academic implications of the new survey are discussed.

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Introduction

Reading instruction requires a balance of bottom-up and top-down approaches (Anderson, 1999, 2008b, 2012b; Grabe, 2009; Schramm, 2008). Both approaches contribute to increasing comprehension, but focus on different cognitive processes. A bottom-up approach emphasizes word recognition and the development of phonological, semantic and syntactic processing. The counterpart to this approach is top-down processing, which focuses on larger units of meaning and how they influence comprehension. Top-down instruction consists of teaching reading strategies, such as activating background knowledge or using a graphic organizer. According to Hyte and Anderson (2011) strategy-based instruction "is the keystone to effective language teaching and learning" (p. 2). But why are language learning strategies so essential? Before we can answer this question, we must distinguish between skills and strategies. We will also explore the importance of metacognitive awareness and self-regulation.

Review of Literature

Strategies vs. Skills

Language learning strategies in TESOL have garnered attention over the years because of the effects they can have on students' learning. Oxford (1990) defines strategies as "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferrable to new situations" (p. 8). Without eliminating the notion of action, Anderson (2005) defines strategies as "the *conscious* actions that learners take to improve their language learning" (p. 757). When applied to reading, strategies are processes that learners consciously control in order to solve reading problems (Afflerbach, Pearson, & Paris, 2008; Grabe, 2009; Griffiths, 2008). These processes may be observable – for example, drawing a graphic organizer, or mental, such as predicting a literary character's actions (Anderson, 2005,

2008b, 2009). When examining elements of these definitions, the purpose of reading strategies becomes clear. Reading strategies are learners' conscious actions, observable or mental, that are employed to solve reading problems and aid comprehension.

It is important to note that reading strategies are actions that are consciously controlled. If these actions become automatic then they become skills (Afflerbach et al, 2008; Anderson, 2009; Grabe, 2009). Anderson (2009) describes the "strategy-to-skill" transformation, stating: "As learners consciously learn and practice specific reading strategies, the strategies move from conscious to unconscious, from strategy to skill" (p. 133). When one considers the time and practice necessary for an action to become automatic, the relationship between strategies and skills changes from a dichotomy to a continuum (Afflerbach et al, 2008; Anderson, 2008b, 2009). It is necessary to define the strategies-to-skills continuum, because when investigating L2 reading strategies it is important to focus on the consciously controlled actions that readers can take to aid comprehension.

When researching or teaching strategies, one must keep in mind that there are no "bad strategies." That is to say that there are no strategies that make one a good reader or a bad reader (Grabe, 2009). The determining factor as to the effectiveness of a reading strategy is how it is used (Anderson, 2009; Chamot, 2008). Anderson (2005) also adds that knowing *when* to use strategies influences language learning, stating: "less successful language learners often use the same strategies over and over again and do not make significant progress in their task" (p. 757). This occurs when language learners do not select strategies according to their reading goals and purpose. Readers should not use the same set of strategies for every text they read, because readers should let their reading purpose drive their strategy selection. Readers should use different strategies when reading a novel for pleasure than when reading a novel for academic

purposes (Grabe, 2009). For example, when reading *To Kill a Mockingbird* for academic purposes, a reader may draw a graphic organizer in order to catalog the novel's themes and motifs. When reading the same novel for pleasure, a reader will most likely not draw a graphic organizer. This is similar to the concept of a toolbox. A toolbox has a variety of tools, and each tool is useful according to the repairman's purpose. The repairman may use a hammer to remove an unwanted nail. It would not be wise to use the hammer again to try to fix a leaky faucet or a loose cupboard. The repairman who repeatedly uses a hammer to fix each problem is similar to a language learner who keeps rereading a paragraph he doesn't understand over and over again. Language learners that repeatedly use the same strategies without success do not recognize that the strategies they are using are not aiding them in their reading purposes. These learners lack a level of what is known as metacognitive awareness, which is required in order to know how to use and evaluate a strategy.

Metacognitive Awareness

To clarify, cognition is thinking, but metacognition is thinking about thinking (Anderson, 1999, 2012a). Anderson expands on this definition, stating: "Metacognition results in critical but healthy reflection and evaluation of one's thinking which may result in making specific changes in how one learns" (2012a, p. 170). Anderson (2012a) makes the point that metacognition is not simply reflecting, but also *evaluating* one's thought processes. The purpose for the evaluation is to help manage one's learning and comprehension (Baker, 2008). Learners must be able to plan and decide which strategy to use, as well as be able to combine various strategies. In addition to these actions, learners must also monitor and evaluate why a specific strategy was chosen and whether that strategy facilitated the accomplishment of the reading task at hand (Anderson, 2012a). Reflection and evaluation are essential components of monitoring comprehension.

Adding to Anderson's definition of metacognitive awareness, Grabe (2009) uses the term "metacognitive regulation" to describe "planning, monitoring, repairing, revising, summarizing, and evaluating" a reader's strategy use (p. 223). Grabe further argues that metacognitive awareness and regulation is not an on-off switch, but rather there are varying levels of metacognitive awareness. These levels of metacognition differ in the amount of attention and focus that is dedicated to the completion of the reading task. There are various factors that could affect a reader's level of metacognitive awareness, such as familiarity with the topic of a text, difficulty level of a reading passage, or the reader's purpose. For example, a reader who is familiar with the lexicon and expository writing style of chemical engineering would exert a lower level of metacognitive awareness when reading a chemical engineering related text than when engaged in a text that outlines different theories about motivation. L2 readers experience these varying levels of metacognition as they read different texts.

It is possible that prior to finding themselves in an L2 reading context, learners may never have had to reflect on their mental processes. This is where the guidance of an L2 reading instructor is vital. An L2 reading instructor should guide students on the path of metacognition by providing opportunities and exercises that require learners to pause and reflect on their cognitive operations (Afflerbach et al, 2008; Baker, 2008). The ability to think metacognitively is one quality that differentiates successful L2 readers from less successful L2 readers (Mokhtari & Reichard, 2002; Mokhtari, Sheorey, & Reichard, 2008).

Successful L2 readers are able to think metacognitively about their cognitive processes, and know when, where, how, and why they use strategies (Grabe, 2009). This means that good L2 readers regulate and evaluate their cognitive processes before, during, and after reading a text (Baker, 2008). Through regular self-evaluation and reflection, L2 readers can become more

strategic readers. A strategic reader "automatically and routinely applies combinations of effective and appropriate strategies" (Grabe, 2009, p. 220), depending on the reader's goals and prior evaluation of cognitive processes. This creates a strategic reader that is self-regulated (Baker, 2008).

Self-regulated readers are language learners who are active participants in their own learning (Dörnyei & Skehan, 2003). This means that when faced with a challenge, the learners find the means and tools necessary to overcome a challenge or achieve a goal within themselves. Instead of relying on a textbook or instructor, learners use strategies and metacognitive processes to enhance learning (Dörnyei & Skehan, 2003; Ortega, 2009). This means that language learning, and in this case reading, is not confined to the classroom and is not teacher dependent. Strategy instruction provides students with the tools necessary to solve reading challenges. Metacognitive regulation raises students' awareness of their cognitive activity so that they know when, how, why, and which strategies to use. Strategy instruction and metacognitive regulation create learners that are autonomous and active participants in the reading process.

Becoming a self-regulated language learner is a process that begins with metacognition and strategy instruction. As mentioned earlier, part of the role of an L2 reading instructor is to help learners recognize the cognitive pathways they are taking. Reading instructors have several options as to how to introduce metacognition and strategy instruction to language learners. Teachers may create their own exercises or tasks that require students to apply or reflect on strategy use and mental processes. Another option is to use instruments that L2 reading researchers have already created. There are a few instruments that are available to L2 reading instructors that can be used to measure metacognitive awareness, perceived strategy use, and increase readers' strategy awareness (Mokhtari & Reichard, 2002; Moktari & Sheorey, 2002).

These instruments are in the form of surveys titled the Metacognitive Awareness of Reading Strategies Inventory (MARSI) and the Survey of Reading Strategies (SORS). These surveys are similar in purpose and format, and will be discussed in greater detail below:

MARSI

The Metacognitive Awareness of Reading Strategies Inventory (MARSI) is a 30-item survey designed to measure global strategies (what a reader does to prepare for reading a text), problem solving strategies (what a reader does when struggling to understand a text), and support (how a reader supports comprehension) reading strategies. Each item is phrased as a statement followed by a five-point Likert scale. As ESL learners read each statement, they rate how frequently they use the strategy described, using the following scale:

1 = "I never or almost never do this."

2 = "I do this only occasionally."

3 = "I sometimes do this." (About 50% of the time)

4 = "I usually do this."

5 = "I always or almost always do this."

After completing the survey, scoring is done by adding up the ratings of the three subscales (global, problem solving, and support), then calculating an average for each subscale, as well as for the whole instrument. The scores then indicate how often (high, medium, or low) learners use those strategies (Mokhtari & Reichard, 2002; Mokhtari et al., 2008).

The MARSI was validated using a native English speaking population of 825 participants from grades 6-12. The reliability of the survey as a whole was .93, "indicating that it was a reliable measure of metacognitive awareness (Mokhtari & Reichard, 2002, p. 252).

The defining feature of this survey is that it was designed to measure the strategy use of native English speakers in middle school and high school when reading academic texts, which were defined as textbooks and academically related material (Mokhtari & Reichard, 2002; Mokhtari et al., 2008). Because the instrument was designed for native speakers, researchers adapted the MARSI to create a new survey for non-native English speaking populations called the Survey of Reading Strategies (SORS).

SORS

From the MARSI, researchers created the Survey of Reading Strategies (SORS) (Mokhtari & Sheorey, 2002). The adaptation from the MARSI primarily consisted of revising the wording of items in order to make it comprehensible to ESL readers, adding two strategies that are not used by native English speakers (mentally translating the text into the native language, and thinking in the native or target language while reading), and removing two items researchers no longer considered strategies. Apart from these changes, the SORS follows the same format and scoring system as the MARSI. The SORS consists of 30 items measuring the use of global, problem solving, and support reading strategies of high-intermediate to advanced L2 learners reading academic texts. The strategies are described in statements, and learners have to rate on a five-point Likert scale how often each strategy is used (Mokhtari & Sheorey, 2002; Mokhtari et al., 2008).

The SORS was administered to an ESL population at two universities. The instrument's reliability was .89, meaning that it consistently measures reading strategy use of non-native English readers (Mokhtari & Sheorey, 2002).

One of the major limitations to the MARSI and SORS is that it is entirely based on self-reporting. The learners taking the survey are simply asked to rate how often they use a strategy.

This means that learners may overestimate or underestimate their strategy use (Mokhtari et al., 2008).

Another limitation is the target learner audience for whom the surveys were designed. The MARSI targets native speakers and the SORS, although simplified, was designed for and validated using high-intermediate and advanced L2 readers. This limits its use among the beginning to low-intermediate L2 reader population.

This thesis reports the creation of a new reading strategies survey, the Contextualized Inventory of Metacognitive Awareness (CIMA), that addresses the limitations of the SORS and MARSI. First, the survey was designed for beginning to low-intermediate L2 readers. Second, the survey asked participants to reflect on their strategy use when presented with a reading context in the form of a simplified, level-appropriate passage. With these specifications, the author created a tool that was conducive to metacognitive reflection designed for low-proficiency L2 readers.

Delimitations

The CIMA was designed for and administered to beginning to low-intermediate L2 readers in an Intensive English Program. Hence, the survey was created with an academic reading purpose in mind. This influenced the process of strategy and text selection.

Although the CIMA was tailored for low-proficiency readers, it was not translated into the participants' native languages, because the survey was created to be a classroom tool, similar to a textbook or worksheet. Also, the survey was administered in a setting where participants could ask their instructors questions if there was any uncertainty or misunderstanding.

The CIMA was designed to be a metacognitive exercise and a classroom tool to help teachers introduce strategy instruction and cognitive regulation. Due to the fact that the CIMA is

an introduction to strategy instruction, the text difficulty was an important factor to consider when creating the survey. A text that is too difficult would cause the readers frustration, while a text that is too easy would not prompt any strategy use. For this reason, the survey passages were simplified to fit within a range of readability for varying levels of low-proficiency readers. Because there are many levels of metacognitive regulation, the CIMA only focuses on having learners reflect on which strategies are being used and when they are employed. Having students reflect on why and how the strategies were used requires deeper levels of metacognition, as well as the guidance and instruction of a reading teacher. A reading instructor needs to model this metacognitive reflection, first, explaining why a strategy was chosen, and then evaluating how it was used and its effectiveness. After modeling the behavior, the instructor should provide the students with moments of explicit practice, allowing them to practice reflecting on and evaluating their strategy use. Since this survey is meant to act as an introduction to cognitive regulation, it only focuses on which strategies were employed and when.

Methodology

Participants

The CIMA was constructed and piloted at the English Language Center (ELC) at Brigham Young University in Provo, Utah. The ELC has two tracks: Foundations and Academic. Each track has four proficiency levels. The Foundations track is for beginning to intermediate English learners. The four levels in the Foundations track are identified as Foundations Prep, Foundations A, Foundations B, and Foundations C. The CIMA was piloted with the students in three of the four levels of the Foundations track. The Foundations Prep students were not included in the study because of their lack of reading skills. The sample comprised seven classes, with three reading instructors and 88 students.

The CIMA was constructed to be a classroom tool and spark metacognitive reflection. With the purpose of the survey in mind, first, the structure of the survey had to be conducive to accurate self-reflection; second, a selection of reading strategies was needed, as well as level appropriate reading passages.

Survey Structure

In order to address the limitations of already existing surveys, the CIMA was constructed differently, while still maintaining some similarities. One of the defining features of the CIMA is that it contextualizes strategy use. Instead of categorizing strategies into three groups (global, problem solving, and support), the CIMA divided the strategies according to when they are employed in the reading process (pre-, during-, and post-reading strategies). Learners are presented with a context, either reading a novel or a newspaper. They are then presented with a list of pre-reading strategies, and are asked to rate on a six-point Likert scale how often they used each strategy. As shown in Figure 1, there is an additional option added to the scale, which is "I don't know what this is."

1 (Never)	2	3	4	5	6 (Always)	I don't know what this is

Figure 1. Likert scale for the CIMA

The survey has a six-point scale as opposed to a five-point scale to prevent students from repeatedly choosing a 3 so as to not appear extremely positive or negative. While rating the strategies, there is a slight element of a hypothetical situation, because some strategies the learners cannot carry out when taking an electronic survey. For example, "look at pictures." The learners cannot handle the novel to look at the pictures within. For this reason the learners are

asked how frequently they use each strategy. The L2 readers may also choose the option "I don't know what this is." The MARSI and SORS do not have this option on their Likert scales. The MARSI and SORS make the assumption that the learners know each strategy. In the case that a learner does not know or understand a strategy, he or she can only rate it as a 1. The CIMA addresses this limitation with the addition of a seventh option. This seventh option makes a distinction between whether a learner knows the strategy or chooses not to use it.

Following the Likert scale, the L2 readers are asked to rank order the same pre-reading strategies in the order of how they were used. This requires the L2 readers to think about the sequence of their actions. The strategy that they used first was ranked as 1. The strategy they used second was ranked as 2, and so on.

After rating the pre-reading strategies, the learners then read a short passage. Following the short text, the L2 readers were asked to self-report their comprehension. The readers were asked: How much of the text do you think you understood? Then, on a scale from 0-100, the students marked a percentage. This question was included to evaluate the readability of the passage from the learner's perspective. After reading the passage, the learners rated the during-reading strategies on a three-point scale. Because the L2 readers are rating these strategies within a context (the presented text) there is no hypothetical situation. The learners are asked: "What did you do while you read _____?" The question is not based on frequency. Either the strategy was used or not. For this reason, when rating the during-reading strategies the L2 readers were asked to "rate" the strategies on a three-point scale: yes, no, and I don't know what this is. Following the during-reading strategies, the L2 readers are asked to rate post-reading strategies on a seven-point Likert scale, with the option "I don't know what this is."

Strategy Selection

With the survey's structure in place, the next step was strategy selection. To begin, the survey developer created a list of reading strategies gathered from the literature, as well as from the reading textbooks used in the ELC's Foundations reading program. This resulted in a list of 25 reading strategies (see Appendix A). This preliminary list was then presented to a select group of teachers.

The teachers became vital when choosing which strategies to include in the survey. Teachers were invited to participate if they were a second year TESOL graduate student or had obtained a Masters degree or Graduate Teaching Certificate in TESOL. They also needed to have either current or recent experience teaching reading. Using these qualifications, eight teachers, two of whom were full-time supervisors, were invited to and agreed to participate in the selection of reading strategies for the CIMA.

The instructors met together and, as representatives of the ELC's Foundations reading program, chose which strategies to include in the survey from the list of 25 reading strategies. Because the CIMA focuses on reading in an academic setting, the instructors were asked to select strategies that were appropriate when reading a text for an academic purpose. The selection process took place during two meetings, and each meeting had three steps. Through categorization, the teachers selected which strategies to include in the survey. The meetings took place as follows:

Meeting 1: Strategy Categorization.

Step 1: Teachers were presented with the list of 25 reading strategies that had been previously compiled by the survey developer. Individually, the instructors categorized the strategies as appropriate for an academic purpose, non-academic purpose, or both.

Step 2: After categorizing the strategies as individuals, the teachers were divided into groups of four and discussed their selection reading strategies. As a group, they were then to find agreement on the categorization of the same strategies for an academic purpose, non-academic purpose, or both.

Step 3: Once the groups finished re-categorizing the list of strategies, the discussion shifted to involve all eight teachers. The two groups compared their categorizations of strategies. After comparing, as a whole, the eight teachers created a master list of strategies appropriate strategies to use when reading a text with an academic purpose.

Meeting 2: Strategy Deployment.

Step 1: With the master list, the teachers individually reflected on the list of strategies created in Meeting 1 and categorized them as pre-reading, during-reading, or post-reading strategies. Some strategies could fall under more than one category, so the teachers were instructed to "check all that apply."

Step 2: Similar to what occurred in the first meeting, the teachers met in groups of four to discuss their individual lists. After some discussion and comparison, each group created lists of pre-, during-, and post-reading strategies.

Step 3: After the small group discussions, the teachers discussed the strategies as a large group. Together, the eight teachers came to an agreement on the division of the strategies into pre-, during-, and post-reading strategies. They created three lists consisting of seven pre-, 22 during-, and 17 post-reading strategies, as shown in Table 1.

Table 1
Original Results from Two Teacher Meetings

Pre-Reading	*During-Reading*	*Post-Reading*
1. Activate background knowledge	1. Activate background knowledge	1. Ask questions to check comprehension
2. Make predictions	2. Ask questions to check comprehension	2. Make predictions
3. Look at chapter headings	3. Make predictions	3. Check predictions
4. Look at pictures	4. Check predictions	4. Determine author's purpose
5. Read a summary	5. Read for details	5. Draw a chart/table
6. Read captions	6. Identify sequence of events	6. Identify cause and effect
7. Use imagination	7. Look at chapter headings	7. Outline sequence of events
	8. Look at pictures	8. Make inferences
	9. Read picture captions	9. Read a summary
	10. Make inferences	10. Reread passage
	11. Reread passage	11. Take notes
	12. Scan for specific information	12. Use own imagination
	13. Skim for main ideas	13. Write a section summary
	14. Take notes in a notebook or computer	14. Write notes in the margin
	15. Write notes in the margin	15. Identify main idea
	16. Use imagination	16. Identify parts of speech
	17. Identify main idea	17. Compare characters
	18. Identify parts of speech	
	19. Skip words you don't know	
	20. Guess words from context	
	21. Describe characters	
	22. Read out loud	

Before these strategies could be entered into the CIMA, some practical elements had to be analyzed. As mentioned earlier, each portion of the survey needed to be divided into three parts (pre-, during-, and post-reading). In each part, the learners needed to rate how often they used the strategies. It was unrealistic for the learners to rate 46 strategies two times. It was not practical in terms of time, and could have frustrated the learners taking the survey. With time constraints in mind, the during- and post-reading strategies lists were shortened to seven strategies. In order to trim the list of strategies, the same teachers were asked to rank the two lists of strategies using the online survey tool, Qualtrics. Of the eight teachers asked to rank the strategies, six participated. The instructors were asked to rank the strategies from 1 (most important) to 17 or 22 (least important). Once the strategies were ranked, an average and standard deviation was calculated for each strategy, as shown in Tables 2 and 3. The lower the average, the higher the overall importance of the strategy based on teacher ratings. The lower the standard deviation indicated there was more consensus of opinion for a given strategy. In the case of the during-reading strategies, three strategies had a low average, but a higher standard deviation. This meant that there was less agreement on those three strategies; therefore, they were replaced with strategies that had higher averages, but lower standard deviations, signifying a greater consensus. The during-reading strategies that had a low average and high standard deviation are highlighted in Table 2. The original lists of 22 and 17 during and post reading strategies were shortened to seven strategies each.

Table 2
Rank Order for the Top Ten During-reading Strategies

Strategy	Average	*SD*
Guess meaning of words from context	4.8	2.2
Make inferences	5.5	5.7
Activate background knowledge	7.7	7.8
Look at chapter headings	8.0	4.4
Look at pictures	8.5	2.3
Ask questions to check comprehension	8.8	5.5
Identify sequence of events	9.3	5.8
Skim for main ideas	9.3	6.5
Skip words you don't know	9.5	8.8
Make predictions	9.7	3.7

Note: The highlighted strategies had a low average, but a high standard deviation. Therefore, they were replaced with strategies that had a lower standard deviation.

Table 3
Rank Order for the Top Seven Post-reading Strategies

Strategy	Average	SD
Ask questions to check comprehension	1.8	1.2
Identify the main idea	4.7	3.1
Check predictions	4.8	2.4
Outline sequence of events	6.3	3.2
Determine the author's purpose	7.2	2.8
Make inferences	7.2	5.2
Draw a chart or table	9.2	3.9

Text Selection

Once the strategies were selected, level appropriate reading passages were needed. As mentioned earlier, the CIMA was designed to prompt metacognitive reflection among novice L2 learners in an academic English environment. When teaching this proficiency level in an Intensive English Program, it is common to teach strategies for academic purposes using texts that are generally read for pleasure. For this reason, the primary researcher selected texts similar

to that of those used in beginning L2 reading classrooms. Texts were chosen with a broad readership that were written with the intent to entertain as opposed to educate. For this survey, texts were selected from a young-adult novel and a newspaper. As opposed to choosing six unrelated texts for the three levels, the primary researcher chose two texts that were later intuitively simplified (Crossley, Allen, & McNamara, 2012). Two master texts chosen, and three simplified versions were created of each text for each proficiency level. This ensured that the learners in the three different levels were being provided with the same literary context, but at level appropriate difficulty.

The two texts that were chosen were thematically related, all pertaining to *The Hunger Games* trilogy and film adaptations (see Appendix B). The first text was a selection from Suzanne Collins' (2010) third installment of *The Hunger Games* trilogy, *Mockingjay*. The second text was taken from the BYU student-run online newspaper, *The Digital Universe*, about the movie release (Asay, 2012).

The chosen passages were first analyzed for text difficulty using Lexile measures. Lexile measures determine the difficulty of a given text based on word frequency and sentence length. The original Lexile measures for the two texts were as follows: a) novel: 810L, b) newspaper: 840L. The Lexile levels of the texts in their original form were beyond the Lexile levels of the three proficiency levels, which ranged from 200L to 700L, as displayed in Table 4. In order for the learners to comprehend the texts, they had to be simplified.

Table 4
The ELC's Lexile levels for the Foundations Track

Level	Lexile
Foundations A	200L-500L
Foundations B	400L-600L
Foundations C	500L-700L

Crossley et al. (2012) argue that intuitive text simplification carried out by an author or instructor produces texts that are linguistically comprehensible and increases text readability. Therefore, the survey developer intuitively simplified the reading passages to fit within the level appropriate Lexile ranges by shortening sentences and substituting less frequent words. For example, a sentence from *Mockingjay* in its original form read as follows: "I stare down at my shoes, watching as a fine layer of ash settles on the worn leather." In order to simplify this sentence to increase its readability, the primary researcher separated the clauses and less frequent words, such as "settles" and "worn," were either replaced with more frequent words or deleted. For example:

Foundations A: I watch my shoes. I watch ash fall on them.

Foundations B: I stare down at my shoes. I watch a layer of ash land on the leather.

Foundations C: I stare down at my shoes. I watch a layer of ash settle on the leather.

After the process of simplification, the different versions of the texts were reanalyzed using the Lexile measure. As presented in Table 5, all six simplified passages scored within the Lexile ranges for each proficiency level.

Table 5
Lexile levels for the Survey Reading Passages

Level	Narrative	Newspaper
Foundations A	290L	400L
Foundations B	430L	490L
Foundations C	580L	660L

The texts were also analyzed using the Coh-Metrix L2 Readability Index. Coh-Metrix is an online tool that predicts text readability based on several variables, such as word overlap between sentences, word frequency, word information and semantics, and syntactic parsing (Crossley, Allen, & McNamara 2011; Crossley et al., 2012). While many traditional readability formulas only take into account word length and sentence length, the additional variables make the Coh-Metrix formula a more accurate predictor of text readability (Crossley et al., 2011). The Coh-Metrix readability scores, presented in Table 6, range from 18 to 33. When using the Coh-Metrix L2 Readability Index, higher scores are an indication of easier readability, based on the variables mentioned earlier. As expected, the reading passages for Foundations A have the highest scores, followed by Foundations B, and then Foundations C. These Coh-Metrix scores demonstrate not only that the two text genres are comparable to one another in readability within each level, but also that the passages differ in difficulty between levels.

Table 6
Coh-Metrix Readability Scores for Survey Reading Passages

Level	Narrative	Newspaper
Foundations A	31	33
Foundations B	23	26
Foundations C	18	19

Before administering the survey, it was important to compare the survey passages to the texts learners have access to and are regularly exposed to. The textbooks used for Foundations A, B, and C, respectively, are *Basic Reading Power 1* (Jeffries & Mikulecky, 2009a), *Active Skills for Reading Student Book 1* (Anderson, 2013), and *Reading Power* 2 (Jeffries & Mikulecky, 2009b). Three samples were chosen from each textbook and the readability for each sample was calculated using Coh-Metrix. As seen in Table 7, there is some congruency between the survey passages and textbook passages, but there also appears to be some inconsistencies within the textbooks themselves. This is due to the fact that publishers have not measured each passage for readability scores.

Table 7
Coh-Metrix Readability Scores for Textbook Passages

Level	Sample A	Sample B	Sample C
Foundations A	27	27	30
Foundations B	15	25	18
Foundations C	23	23	22

Once the strategies and reading passages were selected, the CIMA was piloted using three of the four proficiency levels in the Foundations track at the ELC. The participants completed the survey in the ELC computer lab using the online survey tool Qualtrics. The participants were given 60 minutes to complete the survey. A week later, the students received learner profiles. In the following section, we will discuss the readability and reliability of the survey, the scale diagnosis, rank ordering, learner and classroom profiles, and general feedback from both the L2 reader participants and their instructors.

Results and Discussion

Readability

The instrument's directions had a Lexile score of 350L and a Coh-Metrix readability

score of 35. The readability scores for the reading passages are seen in Tables 6 and 7. The self-

reported comprehension scores for the whole sample size are displayed in Tables 8 and 9. The

individual self-reported comprehension scores were rounded to the nearest tenth and tallied. As

seen in Table 8 and 9, 81% of the participants reported a comprehension score of 70% or higher

for the novel passage, and 90% of the participants reported a comprehension score of 70% or

higher for the newspaper passage. This indicates that the six simplified reading passages that

were used in the survey were appropriate for the participants' level of literary proficiency.

Table 8
Self-reported Comprehension for the Survey Narrative Passage

Observed Count	Percentage	Comprehension Score
2	2	10
1	1	20
2	2	30
3	3	40
5	6	50
4	5	60
13	15	70
24	27	80
15	17	90
19	22	100

Table 9
Self-reported Comprehension for the Newspaper Passage

Observed Count	Percentage	Comprehension Score
2	2	10
0	0	20
0	0	30
0	0	40
3	3	50
4	5	60
8	9	70
13	15	80
20	34	90
28	32	100

Reliability

The instrument's reliability measured .69. Although the reliability score is lower than those of the MARSI and SORS, it is still within acceptable levels of reliability.

The goal of the author was to create a classroom tool in the form of a metacognitive survey that was linguistically at the level of novice to low-intermediate L2 readers. As displayed in Figure 2, the survey did not distribute the participants according to their strategy use, because that was not the purpose of the instrument. The purpose of the survey was to be an exercise that prompts metacognitive reflection. The fact that the three proficiency levels are clustered demonstrates that the instrument was at the appropriate linguistic level, and that the L2 readers have similar strategy use.

Scale Diagnosis

When analyzing the effectiveness of the Likert scale, the researcher only took into consideration categories 1 through 6. The seventh option, "I don't know what this is," was not included in the scale diagnosis, as to not count a lack of knowledge against the participants. The

purpose for having six categories on the Likert scale was to discourage participants from selecting a neutral category, such as 3, and distribute participants' responses. Unfortunately, the six-point Likert scale did not function very well, meaning that there was not an equal probability for each category. As seen in Figure 3, the categories with the highest probability were 1 and 6, signifying that participants most frequently selected the extreme categories, "Never" and "Always." The other categories, 2 through 5, showed little distinction and were not regularly spaced, meaning that the participants did not choose those categories very frequently. It is possible that participants avoided the non-extreme categories, due to ambiguity and multiple options. This means that for rating how frequently each strategy is used, the extreme categories (1 and 6) were most frequently chosen. For future use, the Likert scale would need to be redesigned in order to improve its effectiveness.

```
              Item - MAP - Person
                <rare>|<more>
      8              . +
                       |
                       |
                       |
                       |
      7                +
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                       |
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      6                +
                     . |
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      5              . +
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      3              T+
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                     . |
                     . |
                     . |
      2              . +
                     . |
                     . |
                    .# S|
                     . |
      1                +
                       |
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                     . |
                     . |  FC
      0              . M+  FC
                    #  |S FB   FB   FB   FB   FB   FB   FC   FC   FC   FC   FC   FC   FC   FC
                          FC   FC   FC   FC   FC
                   .## |M FA   FA   FA   FA   FA   FA   FA   FB   FB   FB   FB   FB   FB   FB
                          FB   FB   FB   FB   FB   FB   FB   FB   FC   FC   FC   FC   FC   FC
                          FC   FC   FC   FC   FC   FC   FC   FC   FC   FC   FC   FC   FC   FC
                          FC   FC   FC   FC   FC   FC   FC   FC
            .######### |S FA   FB   FB   FB   FC   FC   FC   FC   FC   FC   FC   FC   FC   FC
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            .### |  FC   FC
     -1    #### +
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              <frequ>|<less>
 EACH "#" IS 3. EACH "." IS 1 TO 2
```
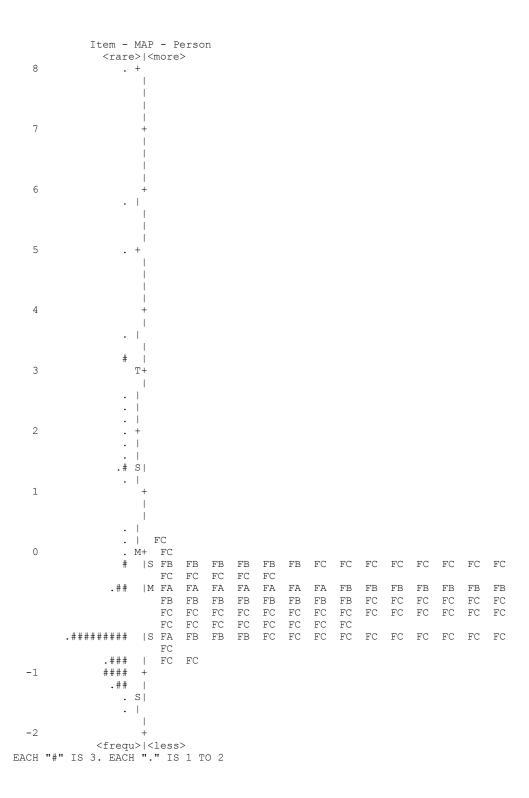
Figure 2. Item-participant distribution vertical scale of the Foundations students. FA = Foundations A; FB = Foundations B; FC = Foundations C.

```
P      -+---------+---------+---------+---------+---------+---------+-
R  1.0 +                                                            +
O      |                                                        666|
B      |11111                                          66666       |
A      |      1111                                   6666          |
B   .8 +         11                                66              +
I      |           111                           66               |
L      |              11                       66                 |
I      |             11                      6                    |
T   .6 +              1                    66                      +
Y      |               11                 6                       |
    .5 +               1                 6                         +
O      |                1               6                         |
F   .4 +                 1             6                          +
       |              22222**2        6                           |
R      |            222       122     6                           |
E      |           222          1 22  *555555555                  |
S   .2 +         222              1  **44        5555             +
P      |      2222               333*******  4444       5555      |
O      |222222               33334445*6 11 **3  4444        555555   |
N      |          333333*444*5**6       1112***33 444444      5555|
S   .0 +********************66              1111******************+
E      -+---------+---------+---------+---------+---------+---------+-
        -3        -2        -1         0         1         2         3
          Person [MINUS] Item MEASURE
```
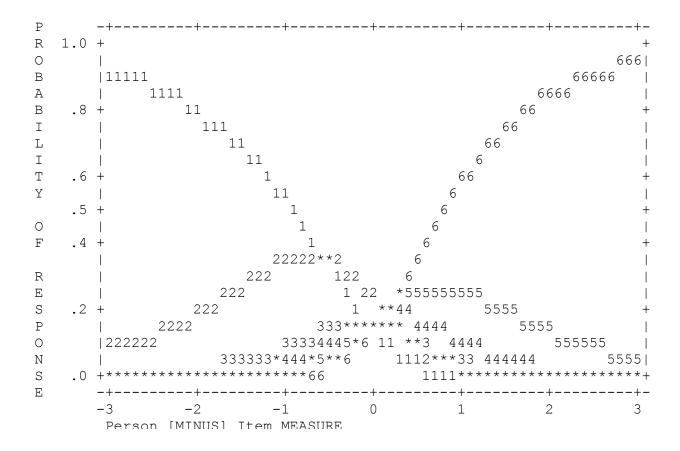
Figure 3. Category distribution for the CIMA

Rank Ordering

In addition to the Likert scales, the participants also completed rank orderings of

strategies in each section of the survey. In order to determine the usefulness of the rank ordering,

we had to calculate a correlation statistic. First, two averages were calculated for each strategy.

One average was calculated for the Likert ratings, and one average was calculated for the rank

orderings. Next, a correlation coefficient was calculated using the two groups of averages. The

correlation coefficient between the Likert ratings and the rank orderings was .08. This low

correlation coefficient signifies that there is no direct correlation between the Likert scale and

rank ordering. The two question types report different data; therefore, both should be included in the CIMA.

Learner and Class Profiles

After completing the CIMA, the participants and reading instructors received individual learner and class profiles. The individual and class profiles were compiled using the "Reporting" program on Qualtrics. Questions were selected and responses were sorted according to each participant's name. Only the Likert scale responses were included in the profiles, because the goal was to create a summary of the participant's responses. The learner profiles were two pages in length and contained each participant's responses on the Likert scale for the pre-, during-, and post-reading strategies rating for the narrative and newspaper passages (see Appendix D). The participant's selection was marked with a 1. The participants did not receive a numerical score on their profile, because the survey was meant to prompt, not measure, metacognitive reflection. Once the participants received their individual profiles they were given a few minutes to review their survey responses and reflect on what they learned about themselves. The participants were given the following guiding questions:

1) What strategies do you always/sometimes/never use?

2) Do you use the same strategies for a book as you do for a newspaper?

3) Compare your strategy use before, while, and after you read?

Then, the participants answered the question "What did you learn about yourself as a reader?" A total of 81 responses were collected using the online survey tool Qualtrics. Seven of the participants were absent the day the profiles were handed out. Six of those who were absent were given their profile two days later, and asked to submit their answers on Qualtrics. The participants were asked to do this on their own time; hence, some either forgot or chose not to

submit their answers. One participant moved to a different state between the time when the CIMA was administered and the profiles were created.

The participants' responses were varied and unique. Some L2 readers shared that they learned new strategies while taking the survey. Others expressed that they felt they needed to use more strategies. The majority of the responses were statements about the participant's own strategy use. The answers were coded into five categories: (a) Awareness of Reading Habits (35 responses); (b) Expressed Need for Personal Improvement (25 responses); (c) Increased Awareness of New Strategies (13 responses); (d) Other (8 responses), and (e) Awareness of Reading Ability (6 responses). Six answers fit into more than one category; therefore, these comments were counted twice. In order to measure intra-rater reliability, the survey developer randomly selected one third of the participants' responses and asked a colleague to categorize the comments. There was 78% agreement between the two sets of categorizations.

Although there were a variety of comments, the majority of the participants' responses were categorized under the following labels: Awareness of Reading Habits, Expressed Need for Personal Improvement, and Increased Awareness of New Strategies. The comments labeled under these three categories demonstrated some level of metacognitive reflection. Thirty-five L2 readers summarized their strategy use. In a few sentences, participants stated which strategies they most frequently used or how their strategy use varied depending on the text type. Twenty-five participants came to the conclusion that there were strategies they were not using, and made some form of a declaration needing to improve in their usage of certain strategies. Responses that mentioned learning new strategies or "reading tips" were evidence of increased awareness of other reading strategies. A participant's response was selected to summarize the other responses

for each category. The five categories, distributions, and participants' answers are presented in

Table 10. All of these responses were insights into the L2 readers' metacognitive processes.

Table 10
Categories and Representative Participant Responses

Category	Number of Responses	Sample Response
Awareness of reading habits	35	I could understand the different strategies that I take while reading in English. It was interesting to know that my strategies while reading depend on the kind of book or newspaper that I need to read. Good, because I can correct myself to be a better reader. [*sic*]
Expressed need for personal improvement	25	There are different skills to read a newspaper than to read a book. I need to use more than one strategy to be a fast reader, as make questions, look at the title, make a little summary at the end. [*sic*]
Increased awareness of new strategies	13	I learned that I didn't do somethings that they are very important for help in reading, Now this survey helps me because I have a new tips for reading. [*sic*]
Other	8	I learned more vocabularies and it helped me to organize my thought. [*sic*]
Awareness of reading ability	6	For the first time, I felt that reading books in English are impossible, but now I feel better for positive to read. [*sic*]

In addition to the individual learner profiles, classroom profiles were provided to the

three reading instructors. The classroom profiles showed the learners responses, and the

frequency with which certain strategies were chosen (see Appendix E). After receiving the

classroom profiles, the reading instructors were asked three questions:

1) What did you learn about your students as readers from the profile?

2) How would you have used this information if it had been available to you earlier in the

semester?

3) Would this information have been helpful when teaching reading strategies?

The three instructors each gained different insights from the classroom profiles. One

instructor was pleased with his students' strategy use, while the other two instructors were more

impressed with a sense of students' individual progress. While their responses differed for the

first question, all three instructors agreed the information would have been helpful, and

mentioned that this information would have influenced how they taught reading strategies. One

instructor said that he would have emphasized the strategies used in the different stages of

reading. The other instructors expressed that they would have spent more time teaching

strategies. As shown in Table 11, the three reading teachers reacted positively to the classroom

profiles.

Table 11
Instructor Responses to Classroom Profiles

Question	Instructor Comments
What did you learn about your students as readers from the profile?	It emphasized the need for me to be aware of individual differences. I see my students at different stages of their learning/application of reading skills. I was glad to see that most of my students use most of the strategies listed at one time or another.
How would you have used this information if it had been available to you earlier in the semester?	I would have focused on strategies more. I would have emphasized the different reading skills that are associated with the different stages of reading: before, during and after. I would probably have spent a little more time talking about the above strategies and explaining their usefulness.
Would this information have been helpful when teaching reading strategies?	Yes

Conclusion

The CIMA is an instrument that was created for beginning to low-intermediate L2 readers to prompt metacognitive reflection of strategy use. The CIMA differs from existing reading strategy surveys because of its target audience, as well as its contextualization of reading strategies. The survey was piloted at the ELC, using beginning to low-intermediate students. Subjects and instructors received profiles containing the results of the CIMA. The student feedback confirms that the survey did prompt metacognitive reflection and that it was linguistically appropriate. The teacher feedback regarding the results of the CIMA suggests that teachers would find this instrument useful in the classroom when teaching reading strategies.

Pedagogical Implications

L2 reading instructors could use the CIMA as a classroom tool to introduce reading strategies or evaluate learners' strategy use and knowledge. With the results from the CIMA, teachers can better plan classroom strategy instruction.

Although the CIMA was administered electronically in this study, it is possible for it to be administered in a paper/pencil format. The students' own copy of the survey would become their learner profile. Administration would be simple and would not be dependent on a program's computer facilities. A paper/pencil form of the CIMA would make it a little more difficult for a teacher to compile a classroom profile. When using Qualtrics, a classroom profile is obtained by simply printing a report. In order to create a classroom profile from a paper/pencil format, the instructor would have to manually enter students' results in a spreadsheet. While there are some benefits to a paper/pencil format, there are also some drawbacks.

For instructors planning on using the CIMA in their classroom, it is recommended that the CIMA be administered during two class periods. This will prevent survey fatigue and will help increase the honesty and accuracy of the learners' self-reflection. Administering the survey during two class periods would also provide spaced repetition of a metacognitive exercise, and might prove more beneficial for the L2 readers than completing the survey in one class period.

The CIMA is also a means by which to introduce metacognition in the classroom. It requires students to think of which strategies they are using and when. Deeper metacognitive reflection, such as why was a strategy chosen and was it effective, requires explicit instruction in the classroom. While the term "metacognition" may not be in the students' lexicon, teaching students the process of monitoring their strategy use and comprehension is an integral part of reading strategy instruction.

Limitations

There are certain conditions and qualities of this project that limit the generalizability of the CIMA. First, the CIMA may not be compatible with the reading curricula of other Intensive English Programs. Although the strategies featured in the survey were taken from L2 reading literature, as well as ESL reading textbooks, the strategies were chosen by a select group of ELC teachers. Therefore, the CIMA reflects the reading curriculum of the ELC. If the CIMA were applied in another Intensive English Program, it is possible that the strategies featured in the survey may not be congruent with the program's reading curriculum. Second, while the setting of an Intensive English Program is found in many universities, the sample size of 88 subjects is not large enough to justify a universal application of this survey. In addition to the small learner sample, only three teachers were able to offer feedback as to the pedagogical usefulness of the survey. In order to better evaluate the CIMA from an instructor's perspective, more reading teachers would need to be included in a study. Furthermore, the CIMA was designed for three specific proficiency levels at the ELC. Other Intensive English Programs may not have the same program structure and may find that the Lexile ratings of the survey passages are not suitable or applicable to the proficiency levels established at their institution. While there are limitations on the generalizability of this instrument, the CIMA is the starting point to creating an instrument that prompts metacognition among novice ESL readers.

Implications for Future Research

This instrument can be further developed to better fulfill its purpose and meet the needs of L2 readers. First, the process of strategy selection could be repeated using a larger pool of teachers from various Intensive English Programs. Increasing the number of instructors used in the process would provide diverse points of view, and various years of teaching experience. This

would make the list of strategies included in the survey more generalizable. Second, the scale

must be more effective. Rather than a six-point Likert scale, it should be a three-point Likert

scale. It is recommended that the following scale be used:

    1 = "I almost never do this"

    2 = "I sometimes do this"

    3 = "I almost always do this"

The three-point scale may be more appropriate because it is simpler and easier to understand for

low-proficient L2 readers who are not familiar with Likert scales and other survey forms. Third,

a curriculum needs to be created that includes instructions for teachers, guidelines for text

selection, as well as a text bank that contains different text genres and levels of difficulty.

Providing reading instructors with the ability to select the texts included in the survey, as well as

the difficulty of the passages, would make the survey more adaptable to L2 readers' varying

needs and levels of proficiency. These changes would bring the CIMA closer to fulfilling its

purpose and increase its generalizability.

      Although the CIMA currently has an acceptable reliability, it could be increased. In order

to achieve this, more items would have to be included in the survey. This could be more samples

of the genres already included (novel and newspaper), or additional genres, such as magazine

articles, blog posts, short stories or biographies. Another approach to increasing the instrument's

reliability would be to have a larger sample size. In order to get a larger sample size the survey

would have to be administered again using novice to low-intermediate readers enrolled in

multiple intensive English programs. Both options would increase the reliability of the

instrument.

In order for the CIMA to be truly useful and applicable in the classroom it must be validated. If the instrument were administered to a larger population with more text genres, the survey could be validated. For now, the validation of this instrument was beyond the scope of this project.

While there is more that can be done to improve the CIMA, an instrument like it is not only needed in Intensive English Programs, but also in K-12 settings. K-12 institutions have ESL learner populations that need guidance and instruction in reading strategy use and metacognitive awareness. Although the CIMA was created for low-proficient adult readers, it could be adapted for a K-12 learning environment.

Future use of the CIMA might call for the instrument to be translated. The translation of the instrument would lend the CIMA to be used in the classroom, as well as in metacognitive research. Translating the CIMA would eliminate the question of whether the learners truly understand the questions and statements in the survey. As mentioned, the CIMA could then be used to gather research regarding metacognitive awareness among novice L2 readers.

The value of the CIMA lies with the L2 learner population it targets. The CIMA is unique in its tailoring to low-proficient L2 readers, as well as in its contextualization of reading strategy use. Researchers and instructors should use the suggestions listed in this thesis as a starting point for further investigating and promoting metacognitive reflection among novice L2 readers.

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Appendix A

Original List of Reading Strategies Compiled by Author

1. Activate background knowledge

2. Ask questions to check comprehension

3. Make predictions

4. Check predictions

5. Determine the author's purpose

6. Draw a chart or a table

7. Read for details

8. Identify/outline cause and effect

9. Identify/outline sequence of events

10. Look at chapter headings

11. Look at graphs and diagrams

12. Look at pictures

13. Look at section headings

14. Make inferences

15. Outline main idea and supporting details

16. Read a summary

17. Identify transition words

18. Read picture captions

19. Reread passage

20. Scan for specific information

21. Skim for main ideas

22. Take notes in a notebook or computer

23. Use own imagination

24. Write a section summary

25. Write notes in the text's margin

Appendix B

Simplified Reading Passages used in the CIMA

Narrative

Level 1

I watch my shoes. I watch ash fall on them. This is where the bed I shared with my sister was. Over there was the kitchen table. The bricks of the fireplace are now in a pile. The pile helps me find the rest of the house.

There is pain on the side of my head. I press my hand against it. Memories fill my mind. I try to remember what is true and what is not. What brought me to be here in my destroyed city? This is hard to answer. My head injury hasn't healed. My thoughts are difficult to understand. Also, the drugs they use to control my pain sometimes make me see things.

I turn around when I hear a sound. In the kitchen is the ugliest cat. "Buttercup," I say. Thousands of people are dead, but he is alive. He looks healthy. How is that possible? He can get in and out of the house through a window. We always left that window open. He eats mice. I don't want to think about what else he ate.

I bend down and say, "Come here, boy." He makes a small noise and comes to me. I pick him up and pet him. I go to the closet and find my bag. I put him in it.

Level 2

I stare down at my shoes. I watch a layer of ash land on the leather. This is where the bed I shared with my sister stood. Over there was the kitchen table. The bricks of the fireplace are now in a pile. The pile helps me find the rest of the house. How else can I find my way in this ash?

There is pain on the side of my head. I press my hand against it. Right on the spot where Johanna Mason hit me with the wire. The memories come as I try to remember what is true and what is not. What events led me to be here in the ruins of my city? This is hard to answer. The effects of my head injury haven't disappeared. My thoughts still are difficult to understand. Also, the drugs they use to control my pain sometimes make me see things. I guess. I'm not convinced that I was imagining when the floor of my room was covered with snakes.

I turn around at the sound of a hiss. In the kitchen stands the ugliest cat in the world. "Buttercup," I say. Thousands of people are dead, but he has survived. He even looks well fed. On what? He can get in and out of the house through a window we always left open. He must have been eating mice. I don't want to think about what else he could have eaten.

I squat down and say, "Come here, boy." He gives a meow and approaches me. I pick him up and pet his fur. Then I go to the closet and find my bag. I put him in it.

Level 3

I stare down at my shoes. I watch a layer of ash settle on the leather. This is where the bed I shared with my sister stood. Over there was the kitchen table. The bricks of the chimney are now in a pile. The pile helps me identify the rest of the house. How else could I find my way when everything is gray?

There is pain on the left side of my head and I press my hand against it. Right on the spot where Johanna Mason hit me with the wire. The memories come as I try to pick out what is true and what is false. What events led me to be here in the ruins of my city? This is hard because the effects of my concussion haven't completely disappeared. My thoughts still are difficult to understand. Also, the drugs they use to control my pain and mood sometimes make me see things. I guess. I'm still not convinced that I was imagining the night the floor of my room was covered with snakes.

I turn around at the sound of a hiss. In the kitchen doorway, back arched, ears flattened, stands the ugliest cat in the world. "Buttercup," I say. Thousands of people are dead, but he has survived. He even looks well fed. On what? He can get in and out of the house through a window we always left open in the pantry. He must have been eating field mice. I refuse to consider the alternative.

I bend down and extend a hand. "Come here, boy." He gives a rusty meow and approaches me. I pick him up, stroking his fur, then go to the closet and dig out my game bag and stuff him in.

Newspaper

Level 1

There were people with pink hair and backpacks at the movie theaters. Some people thought it was a Halloween party. The costumes were not for Halloween. They were for the new movie, "The Hunger Games."

People were waiting in line at 5:20 p.m. for the 12:00 a.m. shows. People had games and food with them.

Ashley Anderson was waiting in line at 5:20 p.m. She was with three friends. "I am excited for the popcorn," Ashley said. "It is a good time to be with friends."

Selena Nielson and Tia Smith were wearing the same shirts. "I think it's going to be good. We are excited for the actors," Selena said.

Brandon Perry was there with his friends. Brandon said, "I want to see the clothes and the costumes."

Nick Taylor was also in the group. "I want to see the fighting," Nick said.

Girls were in shirts showing their favorite character. Emily Avineo, Katelyn Spring and Jacquelin Brown talked about who was the best. They talked about Peeta and Gale.

"I'm excited to see Peeta," Jacquelin said. "He is hot. He is awesome in the book. He is sweet."

Emily and Katelyn like Gale. "We like Gale," Emily said. "Gale is the man."

Autumn Woods and Ryan Botcherby saw the movie at 8 p.m. They saw all of the people in lines as they walked out of the theater. They said they liked the movie.

Level 2

People with pink wigs, backpacks and arrows were seen at the shopping mall. Some people may have thought they were in a 1980s Halloween party. The costumes were not for Halloween. They were for the opening of "The Hunger Games."

People were lining up at 5:20 p.m. for the midnight shows. The excitement could be heard as friends were talking. People had games, books, and food with them.

Ashley Anderson was waiting in line at 5:20 p.m. She was there with her three friends. "I am excited for the popcorn," Ashley said. "It is a good time to hang out with friends."

Selena Nielson and Tia Smallcomb were in matching T-shirts. "I think it's going to be good. Especially with good looking actors," Selena said. "That is what we are excited for."

Brandon Perry was at the theater with his friends. His friends were dressed as people from the book. "I'm excited to see the clothes and the fashion," Brandon said.

Nick Taylor was also in the group. He was excited for something else. "I'm excited for the fighting," Nick said.

The excitement for "The Hunger Games" has been similar to the excitement for other films. "Twilight" and "Harry Potter" created similar excitement. Teenage girls were in T-shirts showing their favorite male character. Emily Avineo, Katelyn Spring and Jacelin Brown discussed who was the best: Peeta or Gale. "I'm excited to see Peeta and all of his glory," Jacelin said. "Because he is hot. He is awesome in the book, and he is sweet." Emily and Katelyn prefer Gale. They were not afraid to give their opinion. "We like Gale," Emily said. "Peeta is too needy. Gale is the man."

Autumn Woods and Ryan Botcherby were able to see the movie at 8 p.m. They saw all of the people in lines as they walked out of the theater. They said they liked the movie.

Level 3

People with pink wigs, sparkles, backpacks and arrows were seen at the local Provo Town Center Mall. Some people may have thought they stepped into an '80s Halloween party. All the costumes were not for Halloween, but for the premiere of "The Hunger Games."

People were lining up at 5:20 p.m. for the midnight showings. The excitement could be felt throughout the air as friends were talking. Card games, books and food were spread throughout the lines.

Ashley Alekma was one of the people waiting in line at 5:20 p.m. She was there with her three friends from work. "I am most excited for the popcorn," Alekma said. "It's just a good time to hang out with friends."

Selea Nielson and Tia Smallcomb were in matching T-shirts. "I think it's going to be good, especially with attractive actors," Nielson said. "That's what we are most excited for."

Brandon Perry was at the theater with a group of his friends. All of his friends were dressed as characters from the book. "I'm excited to see all the clothes and the fashion," Perry said.

Nick Taylor was also in the group. Unlike his friend's excitement for the fashion, he was excited for something else. "I'm excited for all the fighting," Taylor said.

Excitement for "The Hunger Games" has been compared to that of "Twilight" and "Harry Potter." Teenage girls were walking around in T-shirts showing their favorite male character. Emily Avineo, Katelyn Spring and Jacelin Brown debated who was the best: Peeta or Gale. "I'm excited to see Peeta and all of his glory," Brown said. "Because he's way hot. He's awesome in the book, and he's a sweetheart." Avineo and Spring on the other hand are

supporters of Gale. They were not afraid to share their opinion. "We are totally for Gale," Avineo said. "Peeta's a jerk. He is too needy. Gale is the man."

Autumn Woods and Ryan Botcherby were able to see the movie at 8 p.m. They saw all of the lines as they walked out of the theater. They said they were very pleased with the movie.

Appendix C

Contextualized Inventory of Metacognitive Awareness (Version for Foundations B)

Part 1: You are going to read part of this book: *Mockingjay. Mockingjay* is the third book in *The Hunger Games* series. Answer the questions.

1.What do you do BEFORE you read a book like *Mockingjay*?

	1 (Never)	2	3	4	5	6 (Always)	I don't know what this is
Read a summary of the book (1)	○	○	○	○	○	○	○
Read the chapter headings (2)	○	○	○	○	○	○	○
Make predictions (3)	○	○	○	○	○	○	○
Use imagination to think about what will happen in the book (4)	○	○	○	○	○	○	○
Think about what I know about the book (5)	○	○	○	○	○	○	○
Look at pictures in the book (6)	○	○	○	○	○	○	○
Read the words that are underneath the pictures (7)	○	○	○	○	○	○	○
Other: (8)	○	○	○	○	○	○	○

2. Here are the same strategies that are listed above. What do you do FIRST (1st)? What do you do SECOND (2nd)?

_____ Read a summary of the book

_____ Read the chapter headings

_____ Make predictions

_____ Use imagination to think about what will happen in the book

_____ Think about what I know about the book or story

_____ Look at pictures in the book

_____ Read the words that are underneath the pictures

_____ Other

3. You are going to read the first chapter. In these paragraphs, Katniss returned to her city. Her city and home are destroyed.

"I stare down at my shoes. I watch a layer of ash land on the leather. This is where the bed I shared with my sister stood. Over there was the kitchen table. The bricks of the fireplace are now in a pile. The pile helps me find the rest of the house. How else can I find my way in this ash?

There is pain on the side of my head. I press my hand against it. Right on the spot where Johanna Mason hit me with the wire. The memories come as I try to remember what is true and what is not. What events led me to be here in the ruins of my city? This is hard to answer. The effects of my head injury haven't disappeared. My thoughts still are difficult to understand. Also, the drugs they use to control my pain sometimes make me see things. I guess. I'm not convinced that I was imagining when the floor of my room was covered with snakes.

I turn around at the sound of a hiss. In the kitchen stands the ugliest cat in the world. "Buttercup," I say. Thousands of people are dead, but he has survived. He even looks well fed. On what? He can get in and out of the house through a window we always left open. He must have been eating mice. I don't want to think about what else he could have eaten.
I squat down and say, "Come here, boy." He gives a meow and approaches me. I pick him up and pet his fur. Then I go to the closet and find my bag. I put him in it."

Katniss's home and city are destroyed.

4. How much of the text do you think you understood?
I understood _____%

5. Think about what you did WHILE you read. What did you do while reading *Mockingjay*?

	Yes	No	I don't know what this is
Guess meaning of words from context (1)	○	○	○
Make inferences (2)	○	○	○
Look at chapter headings (3)	○	○	○
Look at pictures (4)	○	○	○
Ask myself questions to check comprehension (5)	○	○	○
Identify sequence of events (6)	○	○	○
Make predictions (7)	○	○	○
Other (8)	○	○	○

6. Here are the same strategies that are listed above. What do you do FIRST (1st)? What do you do SECOND (2nd)?

_____ Guess meaning of words from context (1)
_____ Make inferences (2)
_____ Look at chapter headings (3)
_____ Look at pictures (4)
_____ Ask myself questions to check comprehension (5)
_____ Identify sequence of events (6)
_____ Make predictions (7)
_____ Other (8)

7. Think about what you do AFTER you read a book like *Mockingjay*. What do you do?

	1 (Never)	2	3	4	5	6 (Always)	I don't know what this is
Ask myself questions to check comprehension (1)	○	○	○	○	○	○	○
Identify the main idea (2)	○	○	○	○	○	○	○
Check my predictions (3)	○	○	○	○	○	○	○
Outline sequence of events (4)	○	○	○	○	○	○	○
Determine the author's purpose (5)	○	○	○	○	○	○	○
Make inferences (6)	○	○	○	○	○	○	○
Draw a chart or a table (7)	○	○	○	○	○	○	○
Other (8)	○	○	○	○	○	○	○

8. Here are the same strategies that are listed above. What do you do FIRST (1st)? What do you do SECOND (2nd)?

_____ Ask myself questions to check comprehension

_____ Identify the main idea

_____ Check my predictions

_____ Outline sequence of events

_____ Determine the author's purpose

_____ Make inferences

_____ Draw a chart or a table

_____ Other

Part 3: You are almost done!

Next, you will read a newspaper article. The article is from BYU's newspaper, *The Universe*. The article is titled, "Hunger Games' Fans Anticipate Midnight Showings."

9. What do you do BEFORE you read a newspaper article like "Hunger Games' Fans Anticipate Midnight Showings?"

	1 (Never)	2	3	4	5	6 (Always)	I don't know what this is
Read a summary of the article (1)	○	○	○	○	○	○	○
Read the article headings (2)	○	○	○	○	○	○	○
Make predictions (3)	○	○	○	○	○	○	○
Use imagination to think about what will happen in the article (4)	○	○	○	○	○	○	○
Think	○	○	○	○	○	○	○

about what I know about the topic (5)							
Look at pictures in the article (6)	○	○	○	○	○	○	○
Read the words that are underneath the pictures (7)	○	○	○	○	○	○	○
Other: (8)	○	○	○	○	○	○	○

10. Here are the same strategies that are listed above. What do you do FIRST (1st)? What do you do SECOND (2nd)?

_____ Read a summary of the article

_____ Read the article headings

_____ Make predictions

_____ Use imagination to think about what will happen in the article

_____ Think about what I know about the topic

_____ Look at pictures in the article

_____ Read the words that are underneath the pictures

_____ Other

11. Now, you will read the newspaper article. The article is about the opening of the movie, *The Hunger Games.*

*"*People with pink wigs, backpacks and arrows were seen at the shopping mall. Some people may have thought they were in a 1980s Halloween party. The costumes were not for Halloween. They were for the opening of *The Hunger Games.*

People were lining up at 5:20 p.m. for the midnight shows. The excitement could be heard as friends were talking. People had games, books, and food with them.

Ashley Anderson was waiting in line at 5:20 p.m. She was there with her three friends. "I am excited for the popcorn," Ashley said. "It is a good time to hang out with friends."

Selena Nielson and Tia Smallcomb were in matching T-shirts. "I think it's going to be good. Especially with good looking actors," Selena said. "That is what we are excited for."

Brandon Perry was at the theater with his friends. His friends were dressed as people from the book. "I'm excited to see the clothes and the fashion," Brandon said.

Nick Taylor was also in the group. He was excited for something else. "I'm excited for the fighting," Nick said.

The excitement for *The Hunger Games* has been similar to the excitement for other films. *Twilight* and *Harry Potter* created similar excitement. Teenage girls were in T-shirts showing their favorite male character. Emily Avineo, Katelyn Spring and Jacquelin Brown discussed who was the best: Peeta or Gale. "I'm excited to see Peeta and all of his glory," Jacquelin said. "Because he is hot. He is awesome in the book, and he is sweet." Emily and Katelyn prefer Gale. They were not afraid to give their opinion. "We like Gale," Emily said. "Peeta is too needy. Gale is the man."

Autumn Woods and Ryan Botcherby were able to see the movie at 8 p.m. They saw all of the people in lines as they walked out of the theater. They said they liked the movie.

Fans dress up in their *The Hunger Games* costumes for the midnight showing.

12. How much of the text do you think you understood?
I understood _____% (1)

13. Think about what you did WHILE you read. What did you do while reading "Hunger Game's Fans Anticipate Midnight Showings?"

	Yes	No	I don't know what this is
Guess meaning of words from context (1)	○	○	○
Make inferences (2)	○	○	○
Look at chapter headings (3)	○	○	○
Look at pictures (4)	○	○	○
Ask myself questions to check comprehension (5)	○	○	○
Identify sequence of events (6)	○	○	○
Make predictions (7)	○	○	○
Other (8)	○	○	○

14. Here are the same strategies that are listed above. What do you do FIRST (1st)? What do you do SECOND (2nd)?

_____ Guess meaning of words from context

_____ Make inferences

_____ Look at chapter headings

_____ Look at pictures

_____ Ask myself questions to check comprehension

_____ Identify sequence of events

_____ Make predictions

_____ Other

15. Think about what you do AFTER you read a newspaper article like "Hunger Games' Fans Anticipate Midnight Showings?"

	1 (Never)	2	3	4	5	6 (Always)	I don't know what this is
Ask myself questions to check comprehension (1)	❍	❍	❍	❍	❍	❍	❍
Identify the main idea (2)	❍	❍	❍	❍	❍	❍	❍
Check my predictions (3)	❍	❍	❍	❍	❍	❍	❍
Outline sequence of events (4)	❍	❍	❍	❍	❍	❍	❍
Determine the author's purpose (5)	❍	❍	❍	❍	❍	❍	❍
Make inferences (6)	❍	❍	❍	❍	❍	❍	❍
Draw a chart or a table (7)	❍	❍	❍	❍	❍	❍	❍
Other (8)	❍	❍	❍	❍	❍	❍	❍

16. Here are the same strategies that are listed above. What do you do FIRST (1st)? What do you do SECOND (2nd)?

_____ Ask myself questions to check comprehension

_____ Identify the main idea

_____ Check my predictions

_____ Outline sequence of events

_____ Determine the author's purpose

_____ Make inferences

_____ Draw a chart or a table

_____ Other

Appendix D

Sample Learner Profile for a Level 1 Student

What is your name?

Individual Learner Profile - Level 1

What do you do BEFORE you read a book like "Mockingjay"?

#	Question	1 (Never)	2	3	4	5	6 (Always)	I don't know what this is	Mean
1	Read a summary of the book	-	-	-	-	1	-	-	5.00
2	Read the chapter headings	-	-	-	-	-	1	-	6.00
3	Make predictions	-	-	-	-	-	1	-	6.00
4	Use imagination to think about what will happen in the book	-	-	-	-	-	1	-	6.00
5	Think about what I know about the book	-	-	-	-	1	-	-	5.00
6	Look at pictures in the book	-	-	-	-	1	-	-	5.00
7	Read the words that are underneath the pictures	-	-	-	-	1	-	-	5.00
8	Other:	-	-	-	-	-	-	-	-

Think about what you did WHILE you read. What did you do while reading "Mockingjay"?

#	Question	Yes	No	I don't know what this is	Mean
1	Guess meaning of words from context	1	-	-	1.00
2	Make inferences	1	-	-	1.00
3	Look at chapter headings	1	-	-	1.00
4	Look at pictures	1	-	-	1.00
5	Ask myself questions to check comprehension	1	-	-	1.00
6	Identify sequence of events	-	1	-	2.00
7	Make predictions	1	-	-	1.00
8	Other	-	-	-	-

Think about what you do AFTER you read a book like "Mockingjay". What do you do?

#	Question	1 (Never)	2	3	4	5	6 (Always)	I don't know what this is	Mean
1	Ask myself questions to check comprehension	-	-	-	-	1	-	-	5.00
2	Identify the main idea	-	-	-	-	-	1	-	6.00
3	Check my predictions	-	-	-	-	1	-	-	5.00
4	Outline sequence of events	-	-	-	1	-	-	-	4.00
5	Determine the author's purpose	-	-	-	1	-	-	-	4.00
6	Make inferences	-	-	-	-	1	-	-	5.00
7	Draw a chart or a table	-	-	1	-	-	-	-	3.00
8	Other	-	-	-	-	-	-	-	-

What do you do BEFORE you read a newspaper article like "Hunger Games' Fans Anticipate Midnight Showings"?

#	Question	1 (Never)	2	3	4	5	6 (Always)	I don't know what this is	Mean
1	Read a summary of the article	-	-	-	-	-	1	-	6.00
2	Read the article headings	-	-	-	-	-	1	-	6.00
3	Make predictions	-	-	-	-	1	-	-	5.00
4	Use imagination to think about what will happen in the article	-	-	-	-	1	-	-	5.00
5	Think about what I know about the topic	-	-	-	-	-	1	-	6.00
6	Look at pictures in the article	-	-	-	-	-	1	-	6.00
7	Read the words that are underneath the pictures	-	-	-	-	-	1	-	6.00
8	Other:	-	-	-	-	-	-	-	-

Think about what you did WHILE you read. What did you do while reading "Hunger Game's Fans Anticipate Midnight Showings"?

#	Question	Yes	No	I don't know what this is	Mean
1	Guess meaning of words from context	1	-	-	1.00
2	Make inferences	1	-	-	1.00
3	Look at chapter headings	1	-	-	1.00
4	Look at pictures	1	-	-	1.00
5	Ask myself questions to check comprehension	-	1	-	2.00
6	Identify sequence of events	-	1	-	2.00
7	Make predictions	1	-	-	1.00
8	Other	-	-	-	-

Think about what you do AFTER you read a newspaper article like "Hunger Games' Fans Anticipate Midnight Showings"?

#	Question	1 (Never)	2	3	4	5	6 (Always)	I don't understand	Responses	Mean
1	Ask myself questions to check comprehension	-	1	-	-	-	-	-	1	2.00
2	Identify the main idea	-	-	-	-	1	-	-	1	5.00
3	Check my predictions	-	1	-	-	-	-	-	1	2.00
4	Outline sequence of events	-	1	-	-	-	-	-	1	2.00
5	Determine the author's purpose	-	-	1	-	-	-	-	1	3.00
6	Make inferences	-	-	1	-	-	-	-	1	3.00
7	Draw a chart or a table	1	-	-	-	-	-	-	1	1.00
8	Other	-	-	-	-	-	-	-	-	-

Appendix E

Sample Classroom Profile for One Section in Level 3

Classroom Profile - Level 3

What do you do BEFORE you read a book like "Mockingjay"?

#	Question	1 (Never)	2	3	4	5	6 (Always)	I don't know what this is	Responses	Mean
1	Read a summary of the book	-	-	2	1	3	4	-	10	4.90
2	Read the chapter headings	-	-	3	3	-	4	-	10	4.50
3	Make predictions	-	1	2	4	3	-	-	10	3.90
4	Use imagination to think about what will happen in the book	-	2	-	3	2	2	-	9	4.22
5	Think about what I know about the book	2	1	2	3	2	-	-	10	3.20
6	Look at pictures in the book	1	-	1	1	3	4	-	10	4.70
7	Read the words that are underneath the pictures	1	1	2	3	1	2	-	10	3.80
8	Other:	-	-	-	1	3	2	1	7	5.43

Think about what you did WHILE you read. What did you do while reading "Mockingjay"?

#	Question	Yes	No	I don't know what this is	Responses	Mean
1	Guess meaning of words from context	9	1	-	10	1.10
2	Make inferences	8	1	1	10	1.30
3	Look at chapter headings	5	5	-	10	1.50
4	Look at pictures	10	-	-	10	1.00
5	Ask myself questions to check comprehension	6	4	-	10	1.40
6	Identify sequence of events	4	4	1	9	1.67
7	Make predictions	9	1	-	10	1.10
8	Other	-	-	2	2	3.00

Think about what you do AFTER you read a book like "Mockingjay". What do you do?

#	Question	1 (Never)	2	3	4	5	6 (Always)	I don't know what this is	Responses	Mean
1	Ask myself questions to check comprehension	-	1	2	2	4	1	-	10	4.20
2	Identify the main idea	-	-	1	4	4	1	-	10	4.50
3	Check my predictions	-	-	4	1	5	-	-	10	4.10
4	Outline sequence of events	1	1	2	3	1	1	-	9	3.56
5	Determine the author's purpose	2	4	-	2	1	1	-	10	2.90
6	Make inferences	-	1	1	2	2	3	1	10	4.80
7	Draw a chart or a table	3	3	3	-	-	1	-	10	2.40
8	Other	-	-	-	-	-	-	-	-	-

What do you do BEFORE you read a newspaper article like "Hunger Games' Fans Anticipate Midnight Showings"?

#	Question	1 (Never)	2	3	4	5	6 (Always)	I don't know what this is	Responses	Mean
1	Read a summary of the article	1	1	3	1	3	1	-	10	3.70
2	Read the article headings	-	-	-	3	2	5	-	10	5.20
3	Make predictions	-	-	1	5	2	2	-	10	4.50
4	Use imagination to think about what will happen in the article	1	1	3	-	3	2	-	10	3.90
5	Think about what I know about the topic	-	2	2	-	5	1	-	10	4.10
6	Look at pictures in the article	-	-	1	-	1	8	-	10	5.60
7	Read the words that are underneath the pictures	-	1	1	3	1	4	-	10	4.60
8	Other:	-	-	-	-	-	-	2	2	7.00

Think about what you did WHILE you read. What did you do while reading "Hunger Game's Fans Anticipate Midnight Showings"?

#	Question	Yes	No	I don't know what this is	Responses	Mean
1	Guess meaning of words from context	9	1	-	10	1.10
2	Make inferences	8	1	1	10	1.30
3	Look at chapter headings	8	2	-	10	1.20
4	Look at pictures	10	-	-	10	1.00
5	Ask myself questions to check comprehension	5	4	-	9	1.44
6	Identify sequence of events	7	2	1	10	1.40
7	Make predictions	7	3	-	10	1.30
8	Other	-	-	2	2	3.00

Think about what you do AFTER you read a newspaper article like "Hunger Games' Fans Anticipate Midnight Showings"?

#	Question	1 (Never)	2	3	4	5	6 (Always)	I don't understand	Responses	Mean
1	Ask myself questions to check comprehension	-	2	1	4	1	2	-	10	4.00
2	Identify the main idea	-	1	-	1	8	-	-	10	4.60
3	Check my predictions	-	-	2	2	4	2	-	10	4.60
4	Outline sequence of events	-	3	1	3	2	1	-	10	3.70
5	Determine the author's purpose	-	3	2	3	1	1	-	10	3.50
6	Make inferences	-	-	-	4	3	2	1	10	5.00
7	Draw a chart or a table	2	1	2	2	1	-	1	9	3.33
8	Other	-	1	-	-	-	-	1	2	4.50