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Metacognitive Awareness and Reading Strategy use: Investigating the Intermediate Level ESL Students' Awareness of Metacognitive Reading Strategies

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Metacognitive Awareness and Reading Strategy use: Investigating the Intermediate Level ESL Students' Awareness of Metacognitive Reading Strategies

by

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Abstract

Metacognitive reading strategies and conscious attention to reading are some of the main contributors to language learners' reading comprehension because readers can become autonomous if they are aware of which strategy works for them to accomplish their goals faster. In this study, the researcher investigated the reported use of intermediate ESL students' metacognitive strategies and how frequently these participants reported to use metacognitive strategies. Correlational analysis investigated whether there was any relationship among reported metacognitive reading strategy choice and participants' reading placement scores of the adult intermediate English learners when reading a text in English. Thirty-nine participants (N = 39) filled out the Survey of Reading Strategies (SORS) to identify their reported choice of metacognitive reading strategies. There were 3 strategy subscales or factors; Global Reading Strategies, Problem Solving Strategies and Support Reading Strategies. A correlational analysis investigated if there was a positive relationship between students' reading achievement and metacognitive strategy use. Lastly, the researcher interviewed fourteen (N = 14) participants who volunteered to be interviewed. Results revealed that participants reported frequent use of problem solving strategies overall. Problem-solving strategies were reported to be the most preferred by ELLs, followed by Support and Global Reading strategies. A correlation study revealed that the overall scores of all intermediate Intensive English Program students' and reading placement scores did not show any relationship between two variables.

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And finally, I would like to dedicate this thesis to my kids, Deniz and Aslan Miller. They give me more passion and love in life. I hope you never give up educating yourselves and find your true dreams in the future.

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Chapter 1: Introduction

In Second Language (L2) acquisition, reading is considered the most important skill of all four skills because reading is directly related to academic success in all grades. Students who do not have a difficult time constructing meaning from written text are likely to be successful readers (Grabe and Stoller 2002). In addition, language learners take many standardized English tests for a college acceptance in America. Therefore, it is vital to have good reading skills and become a proficient reader. Expectedly, students who are more successful in reading have more access to further education and opportunities in life. Eskey (2005) states that many L2 learners do not need to speak English but required to read in English particularly in colleges or universities. Those L2 learners who can successfully transfer verbal language skills to achieve basic decoding competence and understand different types of texts will not struggle to read (Koda and Zehler 2008). The reading process is multifaceted and unskilled readers are more likely to have issues in constructing the meaning and comprehension of text and L2 learners need to use different reading strategies to improve comprehension (Grabe and Stoller 2002).

In addition to reading skills, knowing strategies are essential as well. Strategies are consciously made actions that learners choose to improve their learning (Anderson 2005). Reading strategies will create additional support to connect what learners are reading to how they are making sense of that text in their minds. Moreover, the use of reading strategies contributes to successful reading comprehension for second language (L2) learners (Koda and Zehler 2008).

Over the last 30 years, research on second language reading started to place more emphasis on reading strategies. Reading strategies are essential to be discovered for many reasons. These strategies are believed to disclose the ways of learners' processes between the link with the text and metacognitive process that they have. In other words, readers can read the text first, then organize and make sense of that information to reach the cognitive goal.

Although it is very hard to be a proficient L2 reader, students who employ good reading strategies can become proficient readers (Grabe and Stoller 2002). Students are advised to focus on metacognition and metacognitive strategies to become a proficient reader (Baker 2008).

Metacognition is reflection on thinking and controlling information over our cognitive process (Anderson 2008). Metacognition involves knowledge and knowing when and how to use specific strategies for learning or problem solving. This term was first discovered by John Flavell in the mid '70s. In regard to the relationship with reading, what we know (metacognitive awareness) and how we know which strategies to use (metacognitive control) will support our comprehension (Baker 2000). Strategic knowledge and awareness are considered paramount in skilled reading, because the comprehension task cannot be achieved successfully if these components are missing (Mokhtari & Sheorey, 2008a, p. 3).

There are couple of reasons why Metacognition should receive significant interest by language scholars and researchers. Anderson (2005) believes that second language learners with strong metacognitive skills can enhance their learning better than others because they can better be prepared once they are aware of the decisions they are making. Metacognitive awareness may be an empowering tool to use in second language reading. There is not a lot of

research in metacognitive reading strategies in second language (L2) studies. There is a need to search and develop effective ways of teaching metacognition to ESL learners in reading.

Moreover, linguists have discussed that proficient L2 learners use more and have more awareness in metacognitive strategies than less proficient readers. It was also indicated by Flavell (1979) that most of the comprehension activities occur at the metacognitive level (p. 2), so successful readers will choose more strategies to comprehend. In the past, linguists found positive correlation between awareness of reading strategies and reading proficiency (Alderson 1984). Henceforward, the positive correlation is still supported by many other researchers.

According to a research posited by Zhang and Wu (2009), successful learners are better at planning, choosing strategies and controlling their comprehension in reading. In addition, effective ESL learners are more likely to be aware of metacognitive reading strategies than less skilled readers. Also, reading proficiencies may be correlated with students' assessment results as well. Native students who read proficiently may achieve higher GPA than those who do not read well (Mokhtari, Sheorey and Reichard 2008). Although not many researchers studied the bond between ESL students' metacognitive reading strategy use and their reading success or reading proficiency levels, it is essential to observe this parallel. Perhaps the same results may be similar when it applies to L2 research since L2 reading is cross-linguistic as Koda (2007) describes it as "in L2 reading, sub skills development involves two languages" (p. 2). So, essentially L2 students can use the same reading strategies that L1 learners use and if not they can be taught these strategies.

Additionally, proficient readers use more metacognitive reading strategies compared to those who struggle in reading. Less proficient readers are not aware of the strategies that solve the comprehension blockage. So, it may be assumed that the source of the problem with reading difficulties is their lack of awareness of some strategies, or not knowing how to use them (Carrell 1998). As a result, this is one gray area that requires focus. Zhang (2001) asserted the importance of specific reading strategies and that readers without specific reading strategies face difficulties which hinder their comprehension. Are Zhang's (2001) and Zhang and Wu's (2009) studies true for intermediate ESL students in a university setting as well? If so, does the intermediate level of English proficiency influence awareness and strategy use? It is critical to understand and observe the details of this awareness and metacognitive strategy use. Understanding this matter will have implications for teaching at university and higher education levels.

Chapter 2: Review of the Literature

The literature review is composed of six sections. First, it opens with a brief overview of metacognition. Next, it briefly touches on the metacognitive learning strategies in reading, followed by the differences between cognitive and metacognitive knowledge. This then leads to the role of metacognitive awareness in L2 reading. Additionally, it talks about metacognitive reading strategies and models. Finally, this leads to the discussion of metacognitive reading strategies and its association to reading comprehension. These literature review sections inform the research questions which investigate the reported use of intermediate level ESL students' awareness of metacognitive reading strategies.

Metacognition

The term metacognition was first used by Flavell (1976) who described metacognition as someone's conscious ability to understand, control, and regulate his or her own cognitive process to reach maximum learning. Metacognition is a descriptive word for using your own cognition (knowledge) to comprehend information and realize your own mind's potential. Its definition in regard to reading is actively thinking about what you are reading to grasp the meaning of the text. Metacognitive awareness is a conscious attention that helps us reflect on what we already know with our cognitive control. So, metacognition and metacognitive awareness are interdependent based on their nature. Briefly, we cannot separate knowledge from attention. Flavell (1976) stated, "I am engaging in metacognition if I notice that I am having more trouble learning A than B; if it strikes me that I should double check C before accepting it as fact" (p. 232). Anderson (2008) suggests that metacognition is

not a direct process of learner strategy that we can apply one step at a time. It is rather a tool that activates different elements of the cognitive process.

Metacognitive Learning Strategies in Reading

Metacognitive knowledge. The foundational framework that John J. Flavell discovered was improved over the years, but the similar dimensions are still accepted by linguists and psycholinguists. Metacognition consists of two principal components; knowledge about cognition and regulation of cognition.

Knowledge of cognition (metacognitive knowledge) refers to the knowledge of learning process in reading. For example, you might know that an academic science journal may take you a longer time to read than a fiction. It is the knowledge of strategies that affects the cognitive process. It includes declarative, procedural, and conditional knowledge (Schraw, Crippen, & Hartley, 2006). Carrell (1998) describes metacognitive knowledge briefly as responding to these questions; “know what”, “know how”, “know why”.

Examples are given below;

Table 1

Metacognitive Knowledge

Declarative knowledge (know what); a learner may know what a paraphrase is as a given reading strategy.
Procedural knowledge (knowing how); a learner may choose to learn information that will take him to the goal of comprehension. (How to paraphrase)
Conditional (strategic) knowledge (knowing why); a learner’s rationale for using a certain strategy. (I need to choose to paraphrase to increase my comprehension of the text and learning).

This is an essential knowledge to understand in reading, because students who have limited use of the knowledge to answer “when”, “what”, “how”, and “why” are less likely to increase their reading achievement (Baker, 2013).

Metacognitive Regulation (Regulatory Strategies in Reading)

Cognition of regulation, metacognitive regulation or monitoring, uses the activities that control and evaluate one’s learning. Regulatory control involves in planning, monitoring, and evaluating reading strategies. For instance; reading before activities (planning), checking learning process (monitoring), and evaluating (reflecting on the strategy) (Anderson, 2008). For example; a student reads a text to understand the main idea of the passage. His goal is to comprehend that text. If he cannot understand the main idea, then he will determine what he is required to do to meet the cognitive goal of understanding the main idea.

Monitoring strategies enable learners to increase the speed of language acquisition time if learners consciously know what strategies to take. According to Anderson (2008), there are five different components to improve reading comprehension. These are (1) preparing and planning for learning, (2) selecting and using strategies, (3) monitoring learning, (4) orchestrating strategies and (5) evaluating strategy use and learning.

During *preparation and planning*, learners organize their tasks to achieve their goal sooner and in more controlled ways. The preparation process assists readers to understand the difficult texts by taking conscious steps to reach the goal. By organizing goals, students can make plans of their thoughts to engage in complex tasks. This might be very helpful for complex assignments to break it down into smaller chunks to make it more manageable.

Selecting and using learning strategies can help solve problems when encountering difficult text**.** Learners recognize what strategy works best for them, and they need to control these conditions to improve acquisition. This is a vital part of the problem solving on any task.

Monitoring is the best strategy to self-examine reader's ability to be on the right track to learn. Readers inquire about whether an idea in their head takes them to correct results to clarify their understanding in the target language. Readers realize and change directions when comprehension breaks down. As a result, they manage which way they should proceed and what information is essential to remember. Anderson (2008) highlights the importance of *orchestrating* various strategies as being prerequisite to problem solving. Realization of how to arrange more than one strategy is an important metacognitive skill. It is one of the most vital components to have, because having the ability to direct, organize, arrange, analyze, and make connections between strategies determines efficient and inefficient second language learners (Zhang, 2001).

As a final step, learners decide how well they can perform in given tasks by *evaluating* or categorizing their strengths and weaknesses. By assessing their strategies, learners can perform better in the next task.

As readers' reading performance progresses, further in addition to their comprehension, they become autonomous and poised learners because they are conscious of which learning styles work for them to choose the best option to understand difficult texts. This accelerates the reading process resulting in better comprehension and achievement levels.

The researcher modified Anderson's metacognitive strategy table to show the effective ways to use regulatory strategies in writing, reading, listening and speaking.

Table 2

Metacognitive Regulatory Strategies

METACOGNITIVE STRATEGIES This table is modified from Anderson, N. J. (2008). Lessons from good language learners 99-109		
Strategies	Metacognition strategies used in different classroom settings	Learners ask such questions to apply these strategies
Preparing and Planning for Learning	Students are writing about differences in gender. 1.Learners individually thought about differences in gender. 2.Instructor engaged learners in a discussion to get them thinking about the topic for the next writing assignment. 3. Learners changed partners after one minute. They repeated these four or five times. 4.The instructor informed students that this will facilitate their writing. -Advanced integrated skills class taught by Emma Torres at the CCCN In San Jose	Strategic Questions What is my goal or my targeted task? What am I supposed to learn? What should I do first? What should I look for in this reading? How much time should I spend to complete this? How do I plan the task? How can I set my goals to plan so I can accomplish the task?
Selecting and Using Strategies	Teacher gives strategies before the writing assignment. 1.Teacher gives explicit discussion about the strategies and takes writer's attention to how to select and use specific strategies for focusing on the audience. 2.Learners think using questions during writing process in a recursive way. -Advanced writing class taught by Joy Jenzen , Moorehead State University-	Strategic questions Which strategies should I use for a given task? Should I use directed or selective to reach my goal?

Monitoring Learning	Before writing a Business assignment 1. Instructor allows students to practice monitoring strategies by giving them four different writing prompts. 2. One of the students immediately thought about agreeing with the topic without thinking. He found out that the strategy did not work to write a good assignment. 3. He picked another topic and made a list of the new content to write about. 4. Instructor encouraged the students to stop when they had a problem and redirect their efforts. 5. Instructor explicitly summarized the value of the metacognitive progress. -Advanced Level Business English course at the English language center by Mark Wolfersberger at Brigham Young University	Strategic Questions How am I doing with this task? Am I on the right track? How should I proceed with this goal? What information is important to remember? What can I do if I do not understand?
Orchestrating Strategies	Orchestrating Strategies in listening class 1. A native speaker of Kurdish listened to an audiotape in French second time. Verbalized different strategies during a radio-call in. 2. Some of the strategies that he orchestrated are guessing unknown vocabulary, using background knowledge to express doubts. 3. He can identify what he knows or does not know by arranging these strategies. -Prof. Laurens Vandergrift during a listening comprehension class in University of Ottawa	Strategic Questions How do I orchestrate various strategies to determine what I do not understand? How do I recognize what works or not? Should I move on to another strategy if this one is not working?

Evaluating Strategy Use and Learning	Reflecting on learning 1. Instructor created a self-evaluation video. 2. He regularly video-taped class and asked students to watch themselves and self –evaluate themselves. 3. Learners shared what they learned from the course and what their final grade should be with a partner. 4. They thought about what they could do differently as an essential question. -Prof Tim Murphey at Yuan Ze University	Strategic Questions How well did I do? What could be done differently? What did I learn? Which strategies worked best? Can I apply the best strategies for the next time? Do I need to go back through the task to fill in any gaps in understanding? How might I apply this line of thinking to other problems?

Cognitive vs. Metacognitive Knowledge

Dimensions of metacognition are widely accepted as knowledge and strategies although there are so many different definitions in the Second Language research. Knowledge, especially declarative knowledge, can be recognized as cognitive rather than metacognitive. The nuance can be found in the way that the information is used. John Flavell distinguishes this difference with whether a cognitive goal is met or not. Knowledge can also be metacognitive if it is used strategically to reach the cognitive goal (Flavell, 1976, 1979). For example; L2 learners often have a difficulty with vocabulary in reading. Student may use her knowledge to plan how to approach the unfamiliar vocabulary. If she knows (awareness) that she has a difficulty with vocabulary, she might use different strategies such as checking the text clues to guess the meaning, try to get help with morphemes, use dictionary or ask for help. She may go back to re-reading the text to understand the passage until her goals are met. Moreover, understanding a text is a cognitive strategy. However, the steps that take us to

acquisition are metacognitive strategies. So, evaluating or assessing text knowledge can ensure understanding the information acquired and this would be a metacognitive strategy. One takes you to reach a specific goal (cognitive) and the other one is being engaged to understand the process and the way you reach that goal (metacognitive). Cognitive and metacognitive strategies are mutually exclusive of one another and trying to separate them would give us the incomplete picture.

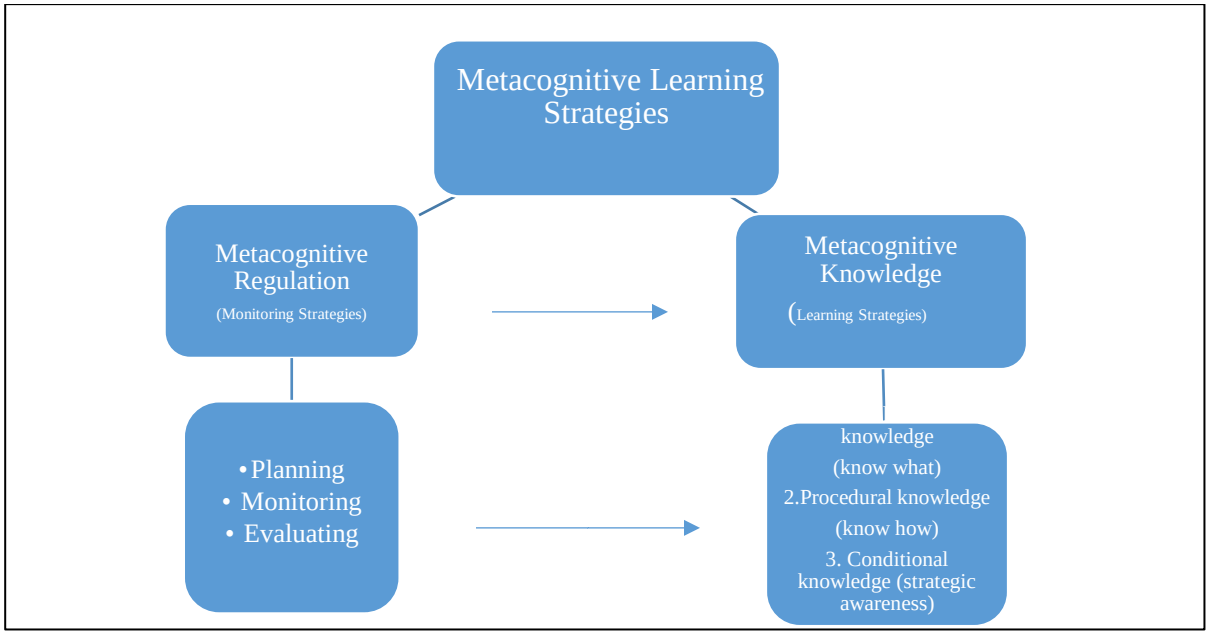

Figure 1. Metacognitive learning strategies (modified from Flavel, 1976 metacognitive groundwork).

Role of Metacognitive Awareness in L2 Reading

Reading is a multifaceted process as noted before. Some researchers see it as having some higher and lower level components and some think that it is more of a constructing meaning that results in comprehension (Grabe, 2014; Koda, 2007). Constructing meaning in text entails more complex mental processing on the reader because the learner needs to

remember the steps such as main ideas, supporting ideas and conclusion to recall this information. This is where the metacognitive nature of reading processing comes into play. Goodman (1967) suggested that the reading is a meaning-making process since it is acquired through communication because the reader is expected to remember the main ideas and many supporting ideas and can recall this information as needed. Grabe (2009) suggests that the higher-level reading skills require more conscious self-examination on the part of the reader. In other words, comprehension with difficult texts can only be processed through metacognition. It is also critical to mention the mental analysis of reading a text. Koda (2005) mentions the importance of metacognitive awareness;

> First, for reading acquisition to occur, the child must understand that graphic symbols correspond to speech units; what each symbol represents; and how they can be combined to form a word. Lacking these basic insights, written symbols are perceived as non-sense scribbles, and their learning is unduly painstaking because it is apparently both useless and meaningless. (p. 314)

Moreover, understanding the nature of text and making a comprehensive analysis requires metacognitive approaches that increases the likelihood of decoding words to find identified elements in some unidentified chains of letters. Without metacognitive abilities, reader's capacity will be limited and will not comprehend the text.

As a final point, it is widely accepted that reading strategies in one language transfers onto another language. It is not clear which particular reading skills transfer or how much they affect the second language development or to what extent. Since transferring reading

skills from L1 to L2 are metacognitive in nature, those who have metalinguistic capabilities are more successful in reading (Koda 2007).

L2 Metacognitive Reading Strategies

Reading strategies in L1 includes bottom up (decoding the smallest units of meaning such as letters and words, identifying letter features, recognize spelling patterns) and top down strategies (form main idea meanings, recognize related and thematic information, build a text model of comprehension (an author-driven summary understanding), and use inferencing, background knowledge, strategic processing and context constraints to create a situation model of reading) (Grabe 2014, 4).

In L2, not only these strategies listed above are required, also the use of metacognitive strategies, self-evaluation of the reader and background knowledge need to be transferred for successful L2 reading (Anderson, 2008). The reader needs to have a conscious effort to select strategies to understand meaning from text. From this point of view, diagnosing L2 learners' strategy choice and their control over the strategies is critical.

Mokhtari and Sheorey's reading strategy model. Mokhtari and Sheorey's (2001b) Reading Strategy Model focused on three categories of metacognitive reading strategies to distinguish skilled from unskilled readers. In this study, their reading model is used to investigate the Intensive English Program students' awareness of strategies because they suggested that " the reader's metacognitive knowledge about reading includes an awareness of a variety of reading strategies and that the cognitive enterprise of reading is influenced by this metacognitive awareness of the reading strategies used" (Mokhtari & Sheorey , 2008b, p. 44). Sheorey and Mokhtari (2002) developed an instrument to assess L2 readers'

metacognitive awareness of reading strategies when reading a text in English. This instrument, the Survey of Reading Strategies (SORS), consists of three metacognitive strategy groups; global, problem solving, and support strategies. Global metacognitive strategies are, what the researcher refers to as intentional overall viewing of strategies that can be utilized previously, during and later in reading activity. They are looked at primarily to set the stage first, then carrying out the reading activity. Strategies include, overall view of the text before reading, guessing the text content before reading, having purpose in mind, checking understanding during reading, deciding what to ignore in text, analyzing and evaluating the information in the text.

Problem-solving strategies are conscious choices that occur when directly involved in text while encountering comprehension problems. These strategies target to repair problems include, re-reading to ameliorate comprehension, making a guess on the unfamiliar vocabulary based on context clues, reading slowly to understand and evaluate what is being read.

Support strategies are back up strategies that assist text comprehension after global and problem-solving strategies are utilized. Translating from L2 into L1, paraphrasing to understand better, underlining information to remind important points, and asking questions to monitor responses for understanding are some of the strategies for support mechanism.

Metacognitive Reading Strategies and its Association to Reading Comprehension Achievement

In the last 30 years, researchers focused on strategy type and use of the complex nature of the reading process. Although the widespread concept of reading models can be

identified as bottom up and town down models, more research of these strategies revealed that the metacognitive awareness determines the level of success and affect reading comprehension achievement. Successful readers use metacognitive strategies (Cohen and Macaro 2007).

Sheorey and Mokhtari (2001) strategy research investigated noticeable differences in strategy choice that was carried out by 152 ESL students at a university in the U.S. Participants who perceived themselves as good readers employed more strategies than those who perceived themselves as unsuccessful readers. ESL students, both in low and high skilled readers reported using moderate amount of support strategies (e.g., rereading for better understanding, paying close attention to the content, and trying to stay focused on reading, p. 136).

Another SORS (Survey of Reading Strategies) based research was conducted with 249 Chinese adult English as a Foreign Language (EFL) students in China. They were divided into three proficiency groups (high, intermediate, and low) based on the scores of three overall English proficiency tests to find out their metacognitive strategy use and awareness. Results posited that the three proficiency levels were different in strategy choice although they were all strategic readers and the global strategies were found to have a correlation with more successful learners (Zhang and Wu 2009). Similarly, to the present study, another research presented that low score and high score reading students used different metacognitive reading strategies and in different frequencies from their counter groups. Highest scorers reported using monitoring comprehension, acknowledging a lack of lexical resources, skimming for main ideas, and re- reading sentence as their reading strategies. Low scorers also reported

recognizing lack of lexical resources and re-reading sentences. Most of the low scorers reported in their interviews that they wanted to use their translators or dictionaries during their reading. A lack of background knowledge and translating into L1 were some of the strategies that low scorers reported using when reading a text (Zhang, 2001). In addition, studies for the reading comprehension achievement show that students who are aware of metacognitive reading strategies tend to score higher than other readers.

Zhang (2013) studied 33 Chinese undergraduate students. Students took a reading comprehension exam. Participants were divided into high and low scorers. His findings displayed that students who chose using metacognitive strategies tended to score higher on the reading comprehension test, however, the students who were not aware of metacognitive strategies were likely to get low scores.

Salataci and Akyel (2002) investigated the relationship of teaching metacognitive strategies with 20 university students. They taught metacognitive reading strategies directly for 4 weeks by using a top-down approach such as using prior knowledge, summarizing, finding main ideas, prediction, clarification, and some other repair strategies. Findings revealed that these strategy knowledge increased participants' reading comprehension test results as well as their awareness of metacognitive strategies. In conclusion, these researches claimed positive correlation between the appropriate use of metacognitive reading strategies and a learner's reading proficiency.

It is conspicuous that metacognitive reading strategies raised several questions that are yet to be resolved. Furthermore, the studies from researchers have been somewhat different, but shows some commonality when it comes to what students report using in reading

strategies. Furthermore, it is important to bring awareness to strategy choice if it helps reading achievement. Conducting more statistical data and interviews will help us better assess the needs of ELL students'.

Research Questions

RQ 1. What type of metacognitive strategies do the intermediate IEP learners report when they are reading in English?

RQ 2. What is the frequency of metacognitive reading strategies that the IEP learners report to use when they are reading in English?

RQ 3. Do the students' metacognitive awareness of reading strategy use have any correlation with their English reading placement scores?

Hypotheses of the Study

RQ1: Based on the assumption that students with good proficiency and reading skills are aware of the metacognitive reading strategies, the researcher anticipates finding high strategy use among all three metacognitive subscale categories.

RQ2: The researcher anticipates finding high frequency in all choices.

RQ3: The researcher hypothesizes that there will be a significant correlation between reading achievement and the reported use of metacognitive strategies.

Chapter 3: Methodology

Chapter 3 describes participants, instruments, and data collection procedures. Participants' information also includes demographic selections such as age, gender, first language, level of education, hours of reading in L1 and L2, and reading placement scores of the participants. Both a questionnaire and semi-structured interviews were used in this study.

Participants

This study described here was carried out at a public university in the Midwest of the United States, where many international students from different countries around the world came to study. The study was conducted with 39 (N = 39; 28 males and 11 females) intermediate Intensive English Program (IEP) students in the summer of 2016. Twenty-two participants were placed in the low-intermediate and seventeen were placed in the high-intermediate classes (N = 39; 22 in the low intermediate class and 17 in the high intermediate class).

All the participants who volunteered in this study were placed in the intermediate level classrooms based on their overall English test scores. Students needed to complete the IEP before they could pursue university studies in different majors. The participants selected for this study were not the beginner level English students. Participants came from all over the world including Saudi Arabia, China, Vietnam, Brazil, Cambodia, South Korea, Africa, and Turkey.

All participants continued their language programs from Monday to Friday all day long. The Intensive English Program provided students with academic and basic conversational English skills to either pursue an academic degree in the University or

continue their language journey in another school. In addition, these students were not previously admitted into the university because of their English proficiency. The University required international students to take certain tests and complete specific language requirements. The IEP of the university in Midwest of the United States offered six different English proficiency level classes. Levels in the IEP ranged from entering to expert proficiency. Entering level class students did not have any English knowledge. Advanced or expert proficiency students could go to graduate school after they met all the academic requirements. Volunteers in this research were placed in intermediate proficiency level courses of the IEP. Thus, the research was only conducted to those intermediate level of proficiency students.

The intermediate level students were placed in their levels based on various criteria. Students were required to take the EPT (Entry Placement test). Furthermore, their overall Intensive English Program grade point average (GPA) could also affect their placement at the end of each semester. Students who achieved a 3.5 GPA in advanced levels could be considered for an admission to the university. So not only the standardized testing required by the University, also the hard work and dedication throughout the semester made a difference to advance to another level in the IEP.

Participants from this study, at the time of the study, received 1 hour reading instruction per day, and about 65-70 hours reading instruction every semester (13-14 weeks). The low-intermediate students in the IEP can have basic conversations such as family, hobbies, interests, travel, and cultures. Low intermediate students can exchange basic conversations without preparation that do not require in-depth knowledge such as politics, or

controversial topics. More proficient or high-intermediate students can create more academic vocabulary, show more confidence in speaking even if they are less familiar with the topics, but this will occur with long pauses. They can handle in-depth discussions such as politics, environment, current daily events only with weeks of practice and preparation. These intermediate level students are trained to learn more academic vocabulary for college. There is a subtle difference between low and high-intermediate level students. As a result, the researcher considered the high and low intermediate students as the same proficiency level. High-intermediate students can be admitted into college courses once they pass their level. Both low and high intermediate groups are expected to understand academic lectures, handle most communicative tasks and situations, display a good range of vocabulary, and demonstrate intermediate grammar structure. More specifically, they were required to read academic texts on general topics and understand complex texts and structures. On the other hand, it is imperative to note that the IEP does not offer courses for explicit metacognitive strategies in the classrooms. As noted before, 39 participants volunteered in this study.

The researcher decided to do research in the Intensive Language Program because the researcher wanted to report on the intermediate English language learners' metacognitive strategy choice. In the Second Language research, the low and advanced level English Learners' metacognitive awareness is often mentioned, but there is not a lot of research on the intermediate proficiency level.

The age of volunteers in this study ranged from 18 to 37 years old (M = 21.5 years). Twenty-eight respondents were between 18 to 22 years old. Nine students were older than 22 years old. Two students were older than 34 years old.

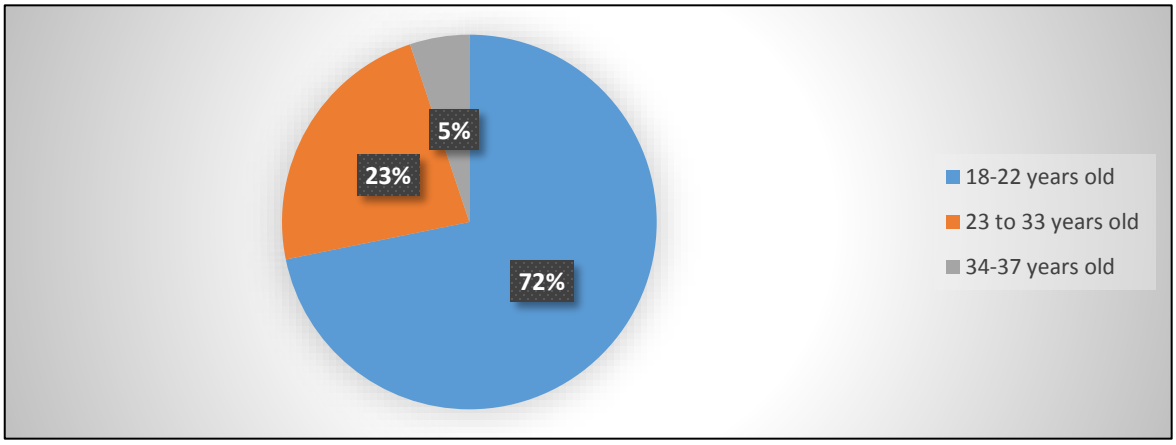

Figure 2. Participants' age.

Table 3

Participants' Age

Age	Participants	Percent
18-22 years old	28	72
23-30 years old	9	23
31 to 34 years old	2	5
Total	39	100

Male participants in this study consisted seventy-two percent (N = 28) and female students were 28 percent (N = 11) of the population size.

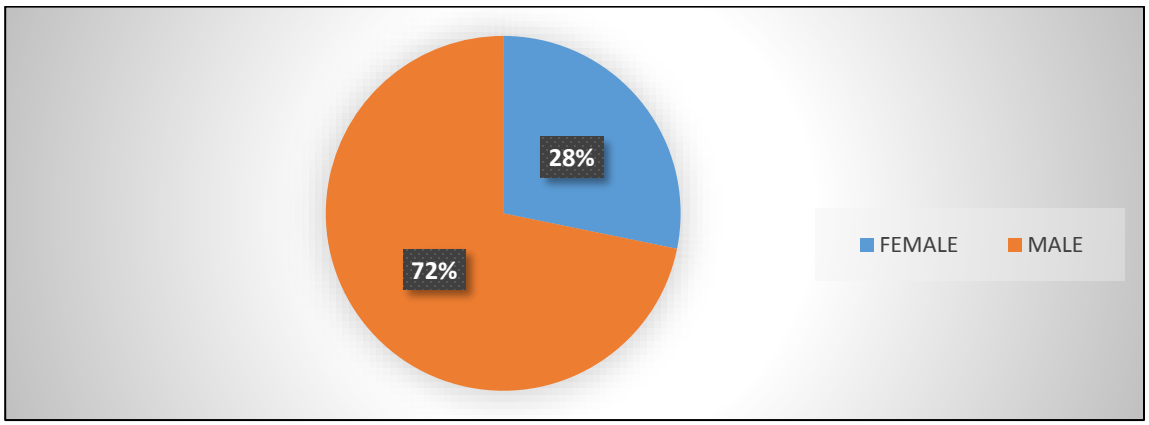

Figure 3. Participants' gender.

Table 4

Participants' Gender

Gender	Participants	Percent
Female	11	28
Male	28	72
Total	39	100

Twenty-one participants spoke Arabic as their first language, followed by Chinese with eight students. Arabic and Chinese were identified as the first languages of 28 out of 39 participants.

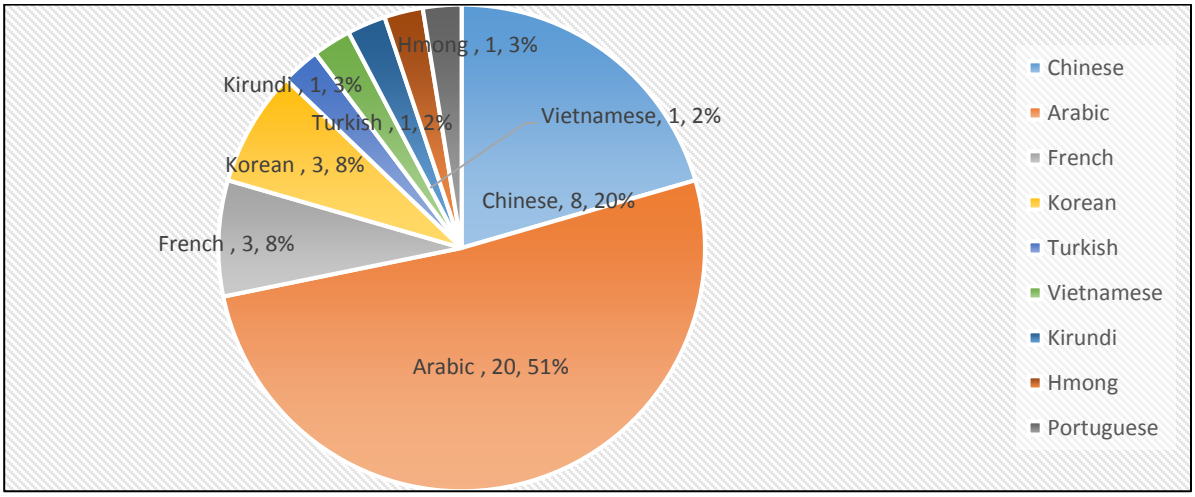

Figure 4. Participants' 1st languages.

Table 5

Participants' First Languages

Languages	Participants	Percent
Arabic	20	51
Chinese	8	20
French	3	8
Korean	3	8
Portuguese	1	3
Turkish	1	3
Vietnamese	1	3
Kirundi	1	3
Hmong	1	3
Total	39	100

All the intermediate IEP students completed a high school degree and came to the United States to pursue further education. Only 33% of the participants had education after high-school.

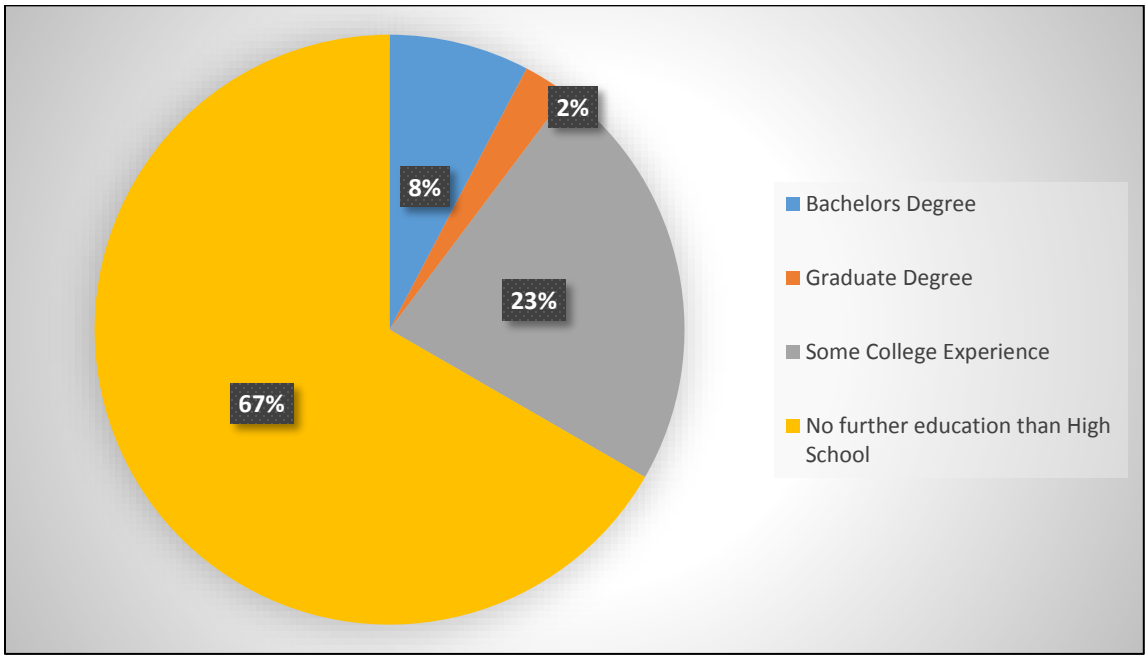

Figure 5. Level of highest education.

Table 6

Participants' Level of Education

	Participants	Percent
Holds a Bachelor's Degree	3	8
Holds a Graduate Degree	1	2
Some college experience >1 semester	9	23
Finished high school only	26	66
Total		

Only eight students reported that they had an education opportunity in another English-speaking country before coming to the U.S. Thirty-one participants reported that they did not study English in another English-speaking country.

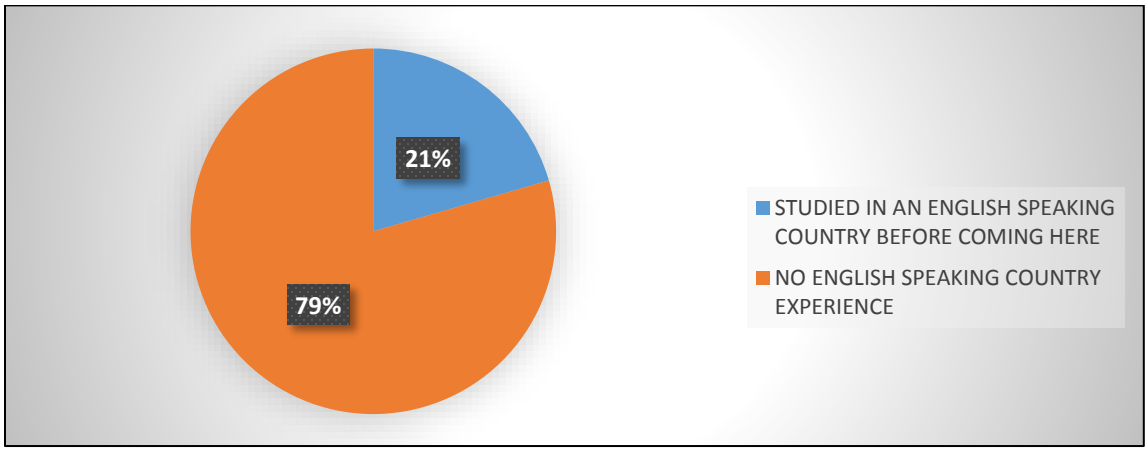

Figure 6. Participants' academic experience in another English-speaking country.

Table 7

Participants' Academic Experience in Another English-speaking Country

	Participants	Percent
Studied in Another English-Speaking Country	8	21
No other countries except the U.S.	31	79
Total	39	100

Twenty-five students reported reading in English more than 4 hours a day.

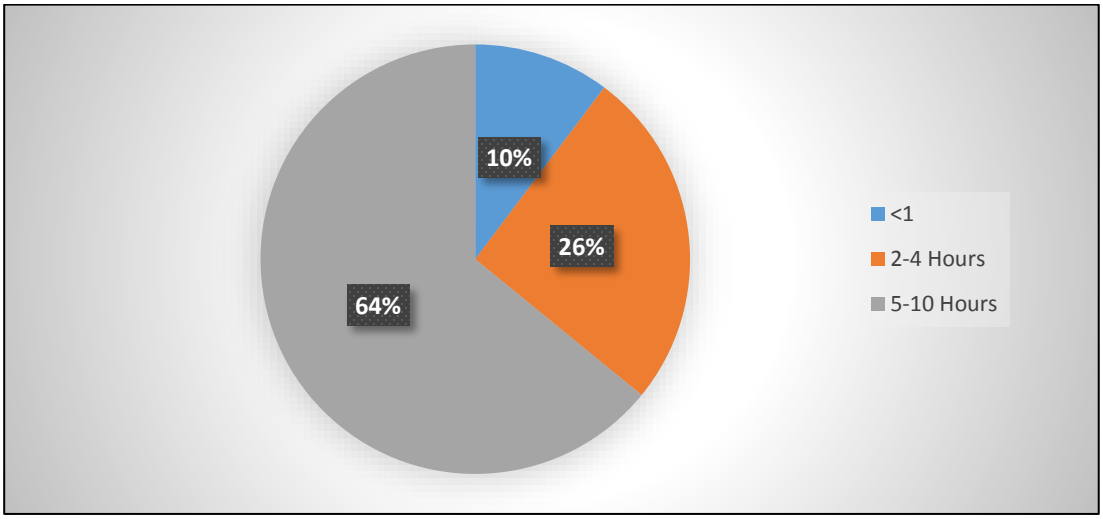

Figure 7. Participants' hours of reading in English.

Table 8

Participants' Hours of Reading in English

Hours	Participants	Percent
< 1 hour	4	10
2-4 hours	10	26
5-10 hours	25	64
Total	39	100

Nineteen participants replied reading in their native language 5 or more hours per day.

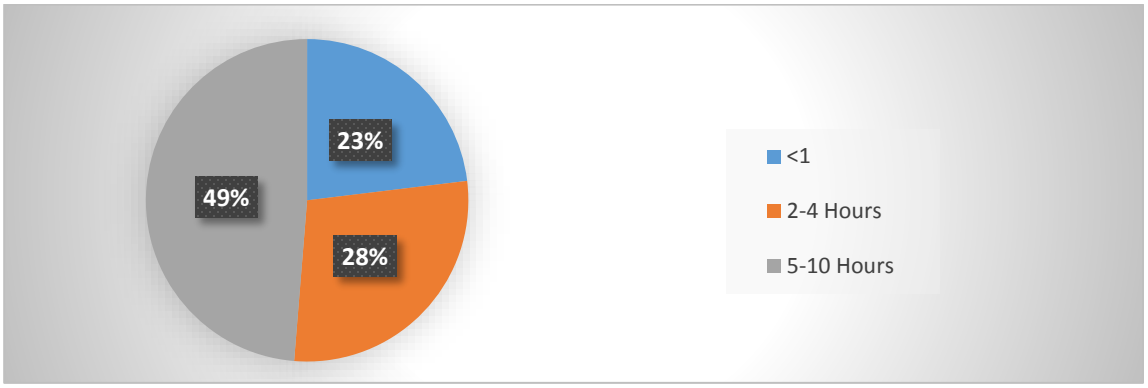

Figure 8. Participants' hours of reading in native language.

Table 9

Participants' Hours of Reading in Native Language

Hours	Participants	Percent
< 1 hour	9	23
2-4 hours	11	28
5-10 hours	19	49
Total	39	100

According to the EPT, intermediate level English learner scores are between 25-74 points in all four domains (Cambridge English Language Assessment, 2017). IEP program in this current research clearly expects students to achieve 60 or above points in all four domains before students can be admitted into the language program. As a result, 25 students scored less than five points on their English Reading placement exam and only 14 students received more than five points.

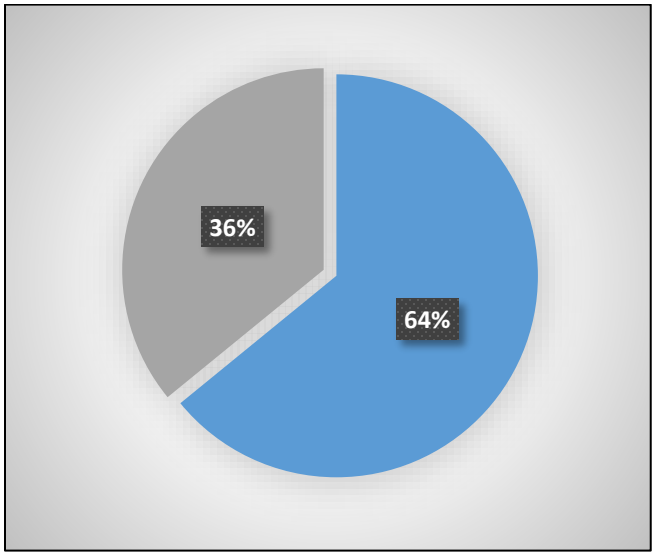

Figure 9. Participants' reading placement scores.

Table 10

Reading Placement Scores of the Participants

Reading Placement Scores	Participants	Percent
(Less than 5 points) < 5 points	25	36
(More than 5 points) >5 points	14	64
Total	39	100

Please see Appendix A to find more information on the participants' background.

Instruments (Materials)

There were two main instruments in this study to answer the research questions; Survey of Reading Strategies (SORS) and a semi-structured interview. For the quantitative part, the SORS was used to answer research questions 1 and 2. Creswell (2007) described surveys as a reliable quantitative source that generates findings efficiently. SORS was chosen

to provide the frequency or numerical expression of the relationships among participants' metacognitive reading choices and their reading proficiency levels. However, deep understanding of the relationship between reading choices and reading proficiency levels should also be investigated beyond statistical measures. For this reason, the qualitative data was used to enhance the study with a semi-structured interview to elicit deeper insights of how intermediate English language learners interpreted or expressed their feelings about reading in English (Creswell, 2007; Mackey & Gass, 2005).

The student background questionnaire was used to understand the demographics portion of the data and gather information that participants could report about themselves. For the correlational study and to answer the research question 3, reading placement test scores were examined to find the relationship between the proficiency levels of participants and their overall reported metacognitive strategy choices.

The SORS (Survey of Reading Strategies) questionnaire. First, the data collection was gathered using the SORS which is a 30-item self-assessment instrument developed by Sheorey and Mokhtari (2002) for measuring "adolescent and adult ESL students' metacognitive awareness and perceived use of reading strategies related to reading academic materials" (p. 2) (see Appendix C for Survey of Reading Strategies). Its purpose is to evaluate the frequency of reading strategies and the perceived choices that the readers make. SORS items uses a 5-point Likert scale that asks the respondents to evaluate according to their reading strategy choice. Students' answers varied based on their opinion at the time of the survey, ranging from 1 to 5. The format of a Likert item in SORS is 1 ("I never or almost never do this") to 5 ("I always or almost always do this"). Students read each SORS statement

and circled the number that they thought best described to them when reading a text. The highest point of '5' represented that they used that strategy a lot or they knew to use that strategy during their reading. The reason why the SORS was picked for this study due to its three broad categories; global reading strategies, problem-solving strategies, and support strategies.

Global reading strategies consist of 13 items that assess students' general abilities of intentional examining and overviewing the text. Problem solving strategies with 8 items focus on strategies that mend comprehension when encountering a difficult text. And last, the SORS uses the support strategies that contain 9 items which help the reader in grasping the text with back up support such as underlining, taking notes, or using a dictionary in order to measure the basic support mechanism (Mokhatri & Sheorey, 2002, p. 4).

Semi-structured interviews. The researcher chose to interview participants in a semi-structured interview setting because this style of interview allowed the interviewer to have a list of questions as a guide and the researcher could still deviate and investigate deeper for more information while still having the freedom of helping respondents to elicit their answers with some natural conversations (Mackey and Gass 2005). The interview questions were adapted and customized by the researcher based on the Survey of Reading Strategies (Sheorey & Mokhtari, 2002). The researcher asked twelve questions and categorized questions under global strategy questions (q. 1-2), problem-solving questions (q. 3-5), support questions (q. 6-7), overall questions (q. 8), and teacher/pedagogical implication questions (q. 9-12). Participants volunteered freely for the semi-structured interviews at their convenience. The researcher interviewed only 14 out of 39 students. A total of 14 students out of 39 (N = 14)

who completed the SORS and the background questionnaire volunteered for the interview. Only eight students from low-intermediate level, and six students from high-intermediate level were interviewed. Creswell (2007) suggested that semi-structured interviews require a minimum sample size of between 5 and 25 to be acceptable and reliable according to the content of the interviews.

Student background questionnaire. In addition to SORS, for more in-depth data analysis, a student demographic background questionnaire was added (see Appendix A for Student Background Questionnaire). This elicited information about participants' gender, age, and highest level of education, native language, how well they think they read in L1 and L2, how long they have been studying English, how many hours per day they read in English and in their native language outside of classroom.

Reading placement scores. Participants of this study gave a consent to release their reading placement scores to the researcher. The Intensive English Program (IEP) of the University requires participants to take the Entrance Proficiency Test (EPT). It is a general language proficiency test for adult non-native speakers of English. In the EPT Test, there are four domains; writing, reading, listening and speaking. The researcher only looked at the reading placement scores of participants. The scores for the reading comprehension range from 0-15; 0 is the lowest score and 15 is the highest that a student can get.

Data Collection Procedures

The researcher went to participants' Intensive English Program classrooms and explained the purpose of the research. Before taking part in this study, each participant was

given an IRB approved consent form that explained the purposes of the research and the tasks they were expected to do.

Additionally, participants were assured that all the data that the researcher collected would be kept confidential. Furthermore, the researcher explained the participants that the subjects had a right to withdraw whenever they felt uncomfortable.

Next, Researcher asked volunteers to sign an IRB approved consent form. The consent form gave a permission to the researcher to collect participants' reading placement scores, the SORS surveys and the background questionnaire. At the end of the consent form, participants could choose whether they would like to take part in a supplementary interview or not.

Later, participants filled out the background questionnaire in class. Researcher gave volunteers the SORS in the last 15 minutes of the class. Participants answered the 30-item SORS. Volunteers selected metacognitive reading strategies that they thought they used in reading English when filling out SORS. The researcher told the participants that there were no right or wrong answers and asked participants to respond honestly. Researcher collected all the forms, and determined how many volunteers wanted to participate for the semi-structured interview. Researcher set up appointments via email or phone in the next 3 weeks to complete the interviews.

Finally, a semi-structured interview was conducted with those students who volunteered to share more in-depth information about their metacognitive reading strategies. Before the interview started, the researcher explained one more time why the responses are needed for the study and how the information will be used in the future. The researcher did not want to restrict students in the standardized way of asking questions and instead, she or he

preferred openly discussing the reading strategies they employ when reading a text. The researcher audio recorded participants' responses by using a digital application. Xwave soft-extra voice recorder audio-application was used to record the interviews (eXtra Voice Recorder 2017). The interviews were collected on the researcher's MacBook laptop and students were interviewed in a reserved room at a library of the Midwestern University. The interviewer also took some notes during the interview. After recording the interviews, the researcher transcribed the respondents' replies. To protect the privacy of the participants of this study, each participant was randomly given a pseudonym.

Data Analysis

Quantitative data analysis. As mentioned before, participants were placed in the intermediate level of the IEP. Their responds to the SORS was the study's quantitative basis to describe the reported use of intermediate level metacognitive awareness and strategy use. To answer research questions 1 and 2 (*What type of metacognitive strategies do the intermediate IEP learners report when they are reading in English* and *What is the frequency of metacognitive reading strategies that the IEP learners report to use when they are reading in English?),* the researcher used descriptive statistics. The quantitative analysis was computed by Statistical Package for the Social Sciences (SPSS Version 22). SPSS 22 calculated means, standard deviation, and frequencies. The strategy choice of participants' individual strategies, types of strategy and overall strategy use were analyzed by examining the means and the standard deviations within the intermediate level of the IEP. To examine students' strategy use, the mean was used to analyze their usage of metacognitive strategies (Oxford and Burry-Stock 1995). The mean scores referred to three different levels of usage.

The high score could be obtained at 3.5 or higher. The mean scores of the medium scores were between 2.5 and 3.4, and the mean scores for the low score was at 2.4 or lower (Sheorey & Mokhtari, 2002). In sum, the descriptive statistics were run to present the most and the least popular metacognitive strategies. This helped researcher to calculate the frequency of overall strategy use, global strategy use, problem solving strategy use and support strategy use of the participants.

As for research question 3 (*Do the students' metacognitive awareness of reading strategy use have any correlation with their English reading placement scores?)*, the researcher used inferential statistics to infer results from the correlation study. The correlation study examined the relationship between the reported use of overall metacognitive strategies of the intermediate IEP students' and the participants' EPT reading placement scores. Correlation study of this research was examined by using the Pearson product moment correlation formula. In order to measure the statistical differences in means between paired sub groups; global, support and problem-solving strategies, t-tests independent sample and paired t-tests were used. The significance level of 0.01 was set.

Qualitative data analysis. The purpose of the qualitative data was to get more insight into participants' awareness of metacognitive reading strategy use and to check whether the qualitative data in the interviews supported the findings of the research question 1 and 2 (*What type of metacognitive strategies do the intermediate IEP learners report when they are reading in English and What is the frequency of metacognitive reading strategies that the IEP learners report to use when they are reading in English?*)

When analyzing and evaluating the qualitative data, the researcher transcribed everything on paper and studied the common patterns, words, and relevant answers. Data analysis was completed under careful examinations of several different observations such as recurring themes, patterns, categories, salient points. Data reduction was supported with tables, brief explanations, and some direct quotes based on Miles and Huberman's (1994) ground work. Based on this foundational work, the researcher first entered the respondents' answers in a file, and categorized responses by strategy choices to help future data analysis. Once all the interviews were completed, the interviewer reviewed the data to identify common, recurrent, or evolving themes. Also, similar traits between respondents who answered comparably were investigated to analyze patterns amongst themes. The researcher also looked for if there were demographics (age, sex, where they are from) or their attitude traits that lead respondents to similar themes.

Chapter 4: Research Results

Interpretation of the SORS Scores

The SORS involves three categories as mentioned before. To investigate the frequency of use for each content, mean, median and standard deviation were exploited for global, problem solving and support strategies. To find the mean of each strategy, the researcher added all the numbers that participants circled for each statement (1, 2, 3, 4, or 5). Next, the researcher divided the subscale score by the number of statements in each category for each subcategory.

Sheorey and Mokhtari (2002) used three different levels (high, medium and low) of means to determine the frequency of metacognitive reading strategy use in their research. Based on Sheorey and Moktari's (2002) work, the researcher determined the means for interpreting the score averages received by students. According to this, high scores are considered 3.5 or higher, mediums are 2.5 to 3.4, and low scorers score 2.4 or lower. The overall average for each category in the SORS questionnaire represents which group of strategies is used most or least. As for the median, the researcher displayed each participant's responses of the values in ascending order. Next, the researcher determined value located half-way through the data set (Median = N1:N39).

And lastly, for the frequency computations, standard deviation was calculated to indicate if the responses are even or uniformed. If the standard deviation is close to the mean, that describes that there is not a wide variance in the responses.

Type of Metacognitive Reading Strategies Reported by the Participants

Table 11 answers research question 1 *(What type of metacognitive strategies do the intermediate IEP learners report when they are reading in English?).* Table 11 also represents that the problem-solving strategies is reported to be used most frequently at a high level of use (M = 3.625, SD = .407). It shows that problem solving strategies are reported to be used in high frequencies followed by support strategy with the moderate use (M = 3.349, SD = .494) and then global strategy with medium level of use (M = 3.341, SD = .473) In addition, participants reported being moderately aware of all metacognitive reading strategies (M = 3.420, SD = .345). Accordingly, the IEP students can be identified as moderate strategy users considering their moderate to high awareness of these strategies.

Table 11

Frequencies of Metacognitive Reading Strategies

Strategy	Mean	Median	Std. Deviation	Level of Use
Support	3.349	3.461	.494	Medium
Problem-Solving	3.625	3.750	.407	High
Global	3.341	3.333	.473	Medium
Total(Overall)	3.420	3.433	.345	Medium

Reported Frequencies for Metacognitive Reading Strategies

To answer research question 2 (*What is the frequency of metacognitive reading strategies that the IEP learners report to use when they are reading in English?*), the

researcher displays the results of the reported frequencies of each SORS subscales as seen in Tables 12-16.

Reported frequencies for global strategies. To find the mean of the global strategy use, researcher added all participants' (N = 39) responses to each statement in the global strategy column and divided the total values by 13. There are thirteen items in global strategy choices. (Mean = Sum of all 39 Participants' Global Scores / 13). Global strategies frequency table (Table 12) compared and looked at the means of responses to the individual strategies. By looking at this table, we can see that *guessing the context of the text(M = 3.72, SD = .938), looking at the overall view of text to see what it is about (M = 3.69, SD = 1.265), having a purpose in mind before reading (M = 3.67, SD = .927), checking understanding (M = 3.59, SD = .938),* and *deciding what to read closely or what to ignore (M = 3.49, SD = .970)* with the highest means ranging from 3.72 to 3.49 are the most frequently reported global strategies. Twenty-four out of 39 participants (62%) claimed that they always or usually try to guess what the content of the text is about when reading in English. In contrast, students did not display a high interest in *critically analyzing and evaluating information presented in the text (M = 2.79, SD = .95), using typographical features to identify key information (M = 2.79, SD = 1.17), and reviewing the text by noting its characteristics like length and organizations* (M = 2.90, SD = 1.14). Only eight participants (21%) answered, "always or usually" for *critically analyzing and evaluating text.*

Table 12

Frequency of Global Support Strategies Reported by IEP Learners

STATEMENT	**N**	**MEAN**	**SD**
24. I try to guess what the content of the text is about when I read	39	3.72	.938
4. I take an overall view of the text to see what it is about before reading it	39	3.69	1.265
1. I have a purpose in mind when I read 2.	39	3.67	.927
23. I check my understanding when I come across new information	39	3.59	.938
12.When reading, I decide what to read closely and what to ignore	39	3.49	.970
27.I check to see if my guesses about the text are right or wrong	39	3.44	1.165
17.I use context clues to help me better understand what I am reading	39	3.26	1.186
15.I use tables, figures, and pictures in text to increase my understanding	39	3.10	1.165
6.I think about whether the content of the text fits my reading purpose	39	3.00	1.100
8. I review the text first by noting its characteristics like length and organizations	39	2.90	1.142
20. I use typographical features like bold face and italics to identify key information	39	2.79	1.174
21. I critically analyze and evaluate the information presented in the text	39	2.79	.951

Reported frequencies for problem solving strategies. To find the mean of the problem strategy use, researcher added all participants' (N = 39) responses to each statement in the problem strategy column and divided the total values by 8. There are only eight items in problem solving choices. (Median = Sum of all 39 Participants' Problem-Solving Scores / 8). Table 13 represents the reported use of problem solving strategies which are the highest employed strategies between the three categories. The most preferred strategy choices were *reading slowly and carefully to understand what is being read (M = 3.97, SD = .90), paying closer attention when the text becomes difficult (M = 3.95, SD = .91),* and *re-reading it to increase my understanding when the text becomes difficult (M = 3.85, SD = .96). Reading slowly and carefully to make sure I understand what is being read* was chosen by 27 participants (69%). The least employed strategy was *stop from time to time and think about what I am reading (M = 3.00, SD = 1.25)* with the mean of 3.00. Only 15 respondents (38%) answered using *stop from time to time and think about what I am reading* "usually or always*"*.

Table 13

Frequency of Problem-solving Strategies Reported by IEP Learners

STATEMENT	**N**	**MEAN**	**SD**
7. I read slowly and carefully to make sure I understand what I am reading	**39**	**3.97**	**.903**
14. When text becomes difficult, I pay closer attention to what I am reading	39	**3.95**	**.916**
25. When text becomes difficult, I re-read it to increase my understanding	39	**3.85**	**.961**
28. When I read, I guess the meaning of unknown words or phrases	39	**3.67**	**.955**
11. I adjust my reading speed according to what I am reading.	39	**3.67**	**.898**
9. I try to get back on track when I lose concentration.	39	**3.49**	**1.254**
19. I try to picture or visualize information to help remember what I read	39	**3.41**	**1.044**
16. I stop from time to time and think about what I am reading	39	**3.00**	**1.257**

Reported frequencies for support strategies. To find the mean of the support strategies, researcher added all participants' (N = 39) responses to each statement in the support strategy column and divided the total values by 9. There are nine items in support strategy choices. (Median = Sum of all 39 Participants' Support Scores / 9). Table 14 shows that the most popular strategies reported were *underlining or circling information in the text to help me remember it (M = 3.77, SD = 1.11), translating from English to my native language (M = 3.74, SD = 1.22), and paraphrasing to better understand the text* with a mean

more than 3.45(M = 3.46, SD = 1.04). The least favorite strategies were reported as *asking myself questions I like to have answered in the text (M = 2.95, SD = 1.16), when text becomes difficult, I read aloud to help me understand what I read (M = 2.85, SD = 1.44),* and *I take notes while reading to help me understand what I read (M = 2.77, SD = 1.06)* with the moderate means less than 3.00.

Table 14

Frequency of Support Strategies Reportedly Used by IEP Learners

STATEMENT	N	MEAN	SD
10. I underline or circle information in the text to help me remember it.	**39**	**3.77**	**1.111**
29. When reading, I translate from English into my native language.	**39**	**3.74**	**1.229**
18. I paraphrase (restate ideas in my own words) to better understand what I read	**39**	**3.46**	**1.047**
13. I use reference materials (e.g., a dictionary) to help me understand what I read	**39**	**3.41**	**1.186**
22. I go back and forth in the text to find relationships among ideas in it.	**39**	**3.28**	**1.191**
26. Ask myself questions I like to have answered in the text.	**39**	**2.95**	**1.169**
5. When text becomes difficult, I read aloud to help me understand what I read	**39**	**2.85**	**1.443**
3. I take notes while reading to help me understand what I read **4.**	**39**	**2.77**	**1.063**

Five most frequently used strategies reported by the participants. The researcher listed all the SORS items in order from highest to lowest frequency to find out the most and

least frequently reported strategies. The intermediate IEP students reported to use these five strategies the most; *I read slowly and carefully to make sure I understand what I am reading* (M = 3.97, SD = .90), *When text becomes difficult, I pay closer attention to what I am reading* (M = 3.95, SD = .91), *When text becomes difficult, I re-read it to increase my understanding* (M = 3.85, SD = .96), *I underline or circle information in the text to help me remember it* (M = 3.77, SD = 1.11), *When reading, I translate from English into my native language* (M = 3.74, SD = 1.22). Top three out of five strategies reported were chosen from the problem-solving strategies.

Table 15

Five Most Frequently Used Strategies Reported by the Participants

STATEMENT	N	MEAN	SD
7. I read slowly and carefully to make sure I understand what I am reading **(Problem Solving)**	**39**	**3.97**	**.903**
14. When text becomes difficult, I pay closer attention to what I am reading **(Problem Solving)**	**39**	**3.95**	**.916**
25. When text becomes difficult, I re-read it to increase my understanding (**Problem Solving)**	**39**	**3.85**	**.961**
10. I underline or circle information in the text to help me remember it. **(Support)**	39	**3.77**	**1.111**
29. When reading, I translate from English into my native language. **(Support)**	39	**3.74**	**1.229**

Five least frequently used metacognitive strategies reported by the participants. In contrast to top five reported strategies, four out of five least frequently used strategies chosen by the participants were global support strategies. *I review the text first by noting its*

characteristics like length and organization (M = 2.90, SD = 1.14), *When text becomes difficult, I read aloud to help me understand what I read* (M = 2.85, SD = 1.44), *I use typographical features like bold face and italics to identify key information* (M = 2.79, SD = 1.17), *I critically analyze and evaluate the information presented in the text* (M = 2.79, SD = 0.95), *I take notes while reading to help me understand what I read* (M = 2.77, SD = 1.06) were reportedly chosen the least used strategies out of thirty statements in the SORS.

Table 16

Five Least Frequently Used Strategies Reported by the Participants

STATEMENT	N	MEAN	SD
8. I review the text first by noting its characteristics like length and organization. **(Global)**	**39**	**2.90**	**1.142**
5. When text becomes difficult, I read aloud to help me understand what I read. **(Support)**	**39**	**2.85**	**1.443**
20. I use typographical features like bold face and italics to identify key information. **(Global)**	**39**	**2.79**	**1.174**
21. I critically analyze and evaluate the information presented in the text. **(Global)**	39	**2.79**	**0.951**
2. I take notes while reading to help me understand what I read. **(Support)**	39	**2.77**	**1.063**

Correlational Study Results

Overall SORS results vs. reading placement results. To answer research questions 3 (*Do the students' metacognitive awareness of reading strategy use have any correlation with their English reading placement scores?),* correlational analysis was conducted to examine association between participants' reading placement scores and their overall SORS

scores. The Scatter Plot (Figure 10) displayed that there is zero correlation between participants' overall SORS scores and their reading placement results. Also, the scatter plot displays that there are no linear relationships so the researcher can infer that there is zero correlation between current study's variables. In other words, participants' reading placement scores and participants' overall SORS scores are not related to one another.

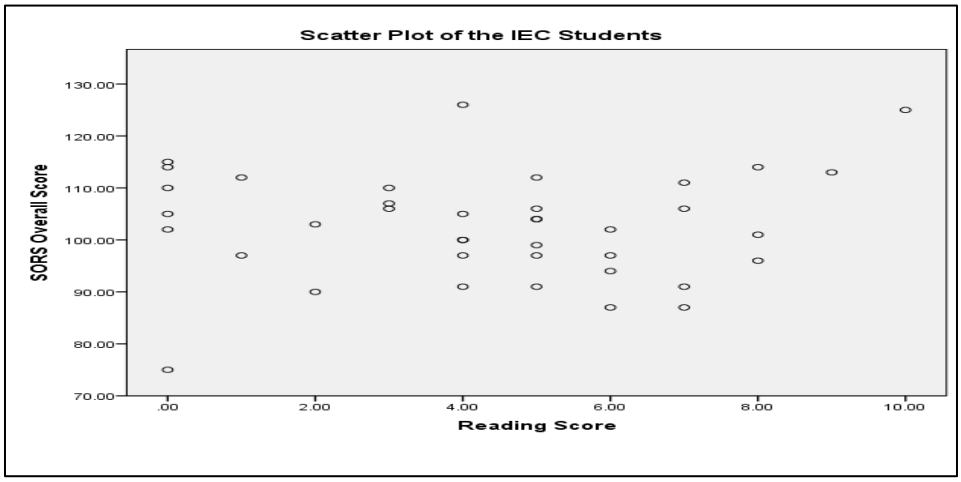

Figure 10. Scatter plot of the IEP students' reading placement scores and participants' overall SORS scores.

Pearson's Correlati*on for the research question 3* determined the degree of direct dependence between two variables. The Pearson product-moment correlation coefficient was used to assess whether there was any relationship between students' reported reading strategy use and their reading placement scores. Independent variables were the overall score of the Survey of Reading Strategies (SORS) instrument and its three sub scores. The dependent variable was the students' reading placement scores.

Correlations for the reading placement results and its relations to the overall scores on the Survey of Reading Strategies (SORS) showed (N = 39), Pearson Correlation r = .0058,

Sig.726. The results showed a non-significant correlation between adult intermediate ESL students' English reading placements test results and their reported metacognitive reading awareness and strategies as measured by the overall score of the Survey of Reading Strategies (SORS) or any of its three sub-scales (Global Reading Strategies, GLOB; Problem Solving Strategies, PROB; and Support Strategies, SUP). Correlation less than 0.01 represents zero relationship between variables (Cohen, et al. 2003). Additionally, the significance criterion was set at 0.05. By using this value, the researcher could assume that there was 9% chance that statistical differences were real and did not occur by chance. Since Sig (2-Tailed) value (Sig = 0.726) is greater than 05, there is no statistically significant correlation between two variables. That means, increases or decreases in overall SORS scores do not significantly relate to increases or decreases in participants' reading placement exams. The correlation value shows strength between +1 and -1. The r value 0.058 means there is no significant relationship between their reading placement scores and their overall reported use of metacognitive strategy use.

Table 17

Correlation between the Participants' Overall SORS Scores and the Participants' Reading Scores

		Reading Score	Overall SORS Score
Reading Score	Pearson Correlation	1	.058
	Sig. (2-tailed)		.726
	N	39	39
Overall SORS Scores	Pearson Correlation	.058	1
	Sig. (2-tailed)	.726	
	N	39	39

Interview Results

Transcriptions of the interviews. Interviews revealed more data that are slightly similar to the results of research question 1 and 2. Interview questions targeted five different emphasis; global strategy choices, problem-solving choices, support strategy choices, overall view of the strategies, and teacher/pedagogical perspectives and what they learn in classrooms regards to strategy choice.

First, to answer global strategy choices, the students were asked to state their purpose of reading, and how they use certain strategies such as checking understanding, taking notes, underlining main ideas, use tables, figures, and pictures in text to increase understanding. Twelve out of sixteen students said they often look for the purpose very carefully. It was noticed that most of the students repeatedly used terms such as looking at the title, skimming and scanning key words, and looking for the main idea. Interestingly, four students who were not aware of global strategies were placed in low-intermediate courses of the IEP. This is what respondents said for this question:

Student A: I analyze the text, look at the pages, (how long it is), after that looking for the main idea, looking at the general concept of the text. I read the questions first, then focus on the answers. I do not like to read the whole thing. I look at a specific paragraph.

Student B: I look at the title first and try to understand what it is about. Then I Skim and scan the questions and read the paragraph fast. My goal is to look at questions first to see what is being asked. Then I answer.

Student C: First it depends what I'm going to read. Of course, you are going to have topic of what you are reading. Sometimes, I check titles and headlines. I am looking at

specifics of what I am reading. Skimming and scanning. I read the whole article sometimes before I check for things.

Student D: I just… read. No no no I do not use strategies.

Student E: I just read it without stopping. If I stop, I cannot complete. Sometimes I read fast but I still complete. I do not have a purpose most of the time. Only strategy that I use is the background knowledge. If I know the topic I understand better so I try to read about the topic first.

Student F: If it is a test or quiz, I directly go to the names and dates and underline them, and cities and countries. And then I skim and scan the text. If I have time, I will read the whole story, but I usually try to read as fast as I can. If it is a quiz or test, I answer the questions. I do not like reading so I do not use any other things.

Second, volunteers of this research were asked to state their use of problem-solving strategies while reading. The researcher asked them support strategy questions to find out what they use to enhance understanding and memory and what kind of choices they prefer to support comprehension if they do not understand the text. This also includes functions to adapt one's reading rate and strategies to understand unknown vocabulary (Mokhtari & Sheorey , 2001a). Twelve out of 14 participants answered this question as re-reading the text to understand. Once students face a difficult text, they tend to read the text slowly one more time rather than identifying certain breakdowns and strategies to ameliorate comprehension. Similarly, 13 out of 14 participants stated that they use a dictionary or translator. Four participants claimed that they only used English to English dictionary because they were told by their teachers that it is better to do it that way. These same four students specified that they

only used translators if they absolutely could not understand the meaning of the text after using English to English dictionaries. Using a dictionary is part of the support strategies in SORS. However, it seemed to the researcher that students might have been explicitly working with their dictionaries in classrooms since almost all answered it as using dictionaries rather than trying to look at context clues, adjusting ways to slow down, paying attention to text, or try to get back on track when losing concentration. Some students also said they used teacher to answer questions and explain the text. Some of the replies were like this:

Student A: I check the dictionary first. I check the word meaning. Vocabulary is the hard part for me. I underline the vocabulary and make a list. Then I write it in English and in my language definitions.

Student B: I ask the teacher first. If I cannot find my teacher then I skip the word. I do not use any other resources.

Student C: I ask my teacher too. I can use the definition or I can ask someone speaks my language. I need to translate.

Student D: I read again. And you know with second language, you cannot really understand you read a sentence. After read this sentence, I think you got a first sentence. You read again and understand the words you do not know. Yeah.

Student E: My English is not good enough to understand everything, then I read the paragraph and do not understand I read the next sentence. You should read the next sentence to understand the context. You do not have to know the exact meaning but you can guess what it is. I try to find clues first. If it does not work, I reread the introduction again. That

happens a lot to me. I took TOEFL test last semester and the topics are very difficult because of my vocabulary.

Student F: I read again to see what it is saying in the paragraph. I try to answer questions and use my dictionary. If I cannot, then I check it on my laptop to find out what it could be. I find a context clue. Then I translate to my native language. I look at the English dictionary and then use Arabic if I do not understand anything.

In regard to answer the third category of the support strategy questions, students identified whether they were using support strategies or not by answering the questions such as if the volunteers of this study were aware of other materials available to them such as take notes, underline, read aloud to help in comprehension, use reference materials like dictionaries, paraphrase/restate to better understand, and ask questions to find answers in the text.

Student A: I use a dictionary English to English. I use the translator English to Arabic. When I need the definition. I go to oxford definition. I want to translate it then I go to English to Arabic. Oxford dictionary gives you a definition. Arabic only gives you the word. With dictionary, I totally understand the word. To understand, I always used English to Arabic and it is not helpful. Not just a word, a full sentence. A long sentence you know. If it is noun or verb, how can I use that word you know it is helpful.

Student B: Sometimes if you check the dictionary and once we just read English to Chinese. You are so quick and nest. After that, I will check English to English because of its accurity (accuracy) to understand. During the article reading, I will use English- Chinese

dictionary. Maybe if I have a vocabulary task, then I'll use English to English. You must read the article so quick and Chinese is quick. I have no time.

Student C: First I find the thesis statement. Then I try to understand the whole article. Then I use the translator.

Student D: I ask a native speaker of Arabic. I ask someone who speaks my native language. I ask someone who speaks good English.

Student E: I must study this word again and again and again. I memorize. not always. To be honest I always use that dictionary oxford for everything every work. You know there is any other way easier than this I do not know.

Student F: I do not know. I have a lot of vocabulary in my brain. Sometimes I forget those, but sometimes I will try to understand those words that I do not know.

Student G: It happened with TOEFL test and I could not understand some questions. I highlighted the key words again to understand.

The researcher also asked students what they think was the most important thing in reading and the biggest obstacle that they faced while reading in English. Ten out of 14 participants said vocabulary was the hardest obstacle to overcome comprehension difficulties. Five students said that they needed to understand the main idea, otherwise it hindered their understanding. Two students stated that if the topic was not interesting to them, they had no desire to comprehend. One participant added that if he does not have any background knowledge, he has a very hard time to understand.

Student A: The details of the main idea is very important. If I do not understand the main idea, I do not understand the whole story. Long words and new vocabulary is the biggest obstacle I face while reading in English.

Student B: When I read something in English, I try not to think in my native language. My biggest obstacle is the lost translation of meaning and my motivation in that reading. Also, the text has to be interesting. If I am not interested in the article then it does not matter if I know the vocabulary or not.

Student C: Vocabulary is the most important things for me. I do not have a big vocabulary and it is the biggest obstacle for me.

STUDENT D: It is fundamental to learn the Vocabulary. Vocabulary is hard to read.

Student E: I think understanding background information is important. For example, If I do not understand the topic, then I need to understand the topic is. For example; we are reading about pollution. I need to have connection with that. If I am reading a science paragraph, I need to know more about pollution to relate and make connections to text. Vocabulary is also very important. My teachers practice this with us. We try to guess the meaning of the word. He teaches us how to get the clues, and try to get the meaning. It helps a lot.

Student F: I think I have a problem with vocabulary. Hard words are too difficult for me to understand

Finally, the last part of the interview focused on the IEP teachers and how students were being taught metacognitive strategies or if students were aware of these reading strategies before.

When students were asked if their teacher taught them any reading strategies or things like these to help them read better in English, most of the students answered similarly. Thirteen out of 14 students (92%) said they learn strategies such as skimming, scanning, chunking big paragraphs or sentences into smaller ones, looking at the title, looking at the pictures, looking at the questions, and summarizing the paragraph. Five students said they need to learn more reading strategies because it really helped them understand the long paragraphs. In one instance, student B said, "My teacher told me to look at the title and questions first to skim and scan ideas from those. Those strategies really helped me understand better".

The researcher also asked what the teachers in the IEP should do differently in reading classes. Eight participants said, they needed more time to comprehend the texts and asked for a challenging curriculum that incorporates American short stories and challenging, famous novels. Additionally, the same participants showed interest American literature and authentic traditional stories to increase reading fluency outside the classroom. One student said teacher read-aloud would be excellent to pronounce the words correctly and catch up with the speed of the teacher. The same respondent used these exact words; "I wish I could hear the teacher read the text because hearing helps me pronunciation too. They explain better too".

The last question of the interviewer focused on suggestions of the students for the IEP teachers. Nine out of 14 students said teachers needed more challenging and rigorous classroom environments because they did not feel like they read enough in their reading class. Student B stated, "I do not feel like I am learning new things. It is not above my level." Some teachers did not give them enough time in class so they lost interest in reading in classroom.

One student said teachers were not organized and he was lost because one lesson was a lot different than the others. Repetition was not supported to increase retention. Overall, they were happy with the teachers but the main consensus was that it was not challenging for them. Student C said, "I did not learn too much because teachers give us easy things to read all the time. I want to read novels and learn more vocabulary and stories".

After transcribing the data, the researcher found similar patterns of strategy use with the SORS (table 18). During the interviews, the researcher found that students reported to utilize these top three strategies; using *reference materials (N = 13, 92%), translate into L1 (N = 10, 71%), and having a purpose in mind before reading (N = 10, 71%).* Thirteen out of 14 respondents said that they translate into L1 or in L2 when facing unknown vocabulary or comprehension problems. Ten out of 14 respondents said they need to translate words in L1 to have a deeper understanding. Ten out of 14 students reported that they think about the purpose of the text before reading and look for what to search for.

Table 18

Interviewees' Metacognitive Reading Strategy Use

Metacognitive Reading Strategy	**Strategy Type**	**Sample Size(N)**	**Percentage**
I use reference materials (e.g. dictionary) to help me understand what I read	**Support Strategy**	13	92
Having a purpose in mind	**Global**	10	71.4
When reading, I translate from English into my native language.	**Support Strategy**	10	71.4
I take an overall view of the text to see what it is about before reading	**Global**	7	50
I go back and forth in the text to find relationships among ideas in it.	**Support Strategy**	7	50
When text becomes difficult, I re-read it to increase my understanding	**Problem-Solving**	7	50
When I read, I guess the meaning of unknown words or phrases	**Problem-Solving**	7	50

The interview respondents reported eleven new strategies that were not included in the Survey of Reading Strategies(SORS) (Table 19). It is fascinating that 13 out of 14 respondents (92%) used the words “skim”, “scan”, “main idea”, and “chunking”. Similarly, majority of participants (N = 11, 78%) stated that they look for the main idea or gist of the story when reading in English. Eight out of 14 respondents (57%) said they highlight key words and chunk long sentences into short ones. Similarly, eight participants said they need background information or they will not understand the text. They utilize technology to read more about the topic. *Drink water when I lose my concentration (N = 6, 42%), Take a break when I lose my concentration (N = 6, 42%), Close my eyes and refresh my mind when I lose my concentration(N = 6, 42%) , I use a native speaker or my teacher(N = 5, 35%), Understand the author’s purpose(N = 3, 21%),* and *learning new vocabulary before the reading if I cannot understand the text(N = 2, 14%)* were other strategies found during the interviews.

Table 19

New Strategies Discovered by the IEP Participants

Metacognitive Reading Strategy	**Strategy Type**	**Sample Size(N)**	**Percentage**
Skim and scanning the text before reading	**GLOBAL**	13	92
Find the main idea or gist	**GLOBAL**	11	78
Chunk long sentences into small ones to increase comprehension	**GLOBAL**	8	57
Highlighting key words	**SUPPORT**	8	57
Using background knowledge (utilizing technology to find out more about the background of the text when encountering difficult text).	**PROB SOL**	8	57
Drink water when I lose my concentration	**PROB SOL**	6	42
Take a break when I lose my concentration	**PROB SOL**	6	42
Close my eyes and refresh my mind when I lose my concentration	**PROB SOL**	6	42
I use a native speaker or my teacher	**SUPPORT**	5	35
Understand the author's purpose	**SUPPORT**	3	21
Learning new vocabulary before the reading if I cannot understand the text	**SUPPORT**	2	14

The results of this study revealed that the intermediate IEP students of the Midwestern University of the United States reported medium use of overall metacognitive awareness and strategy choice. Problem solving strategies are the IEP learners' favorite, followed by Support strategies and then Global Reading Strategies regardless of their reading placement scores. Intermediate IEP students' reading placement scores and their overall SORS score results did not indicate any relationship at all.

Chapter 5: Discussions

In this research, research question 1 and 2 uncovered the frequency and use of self-reported metacognitive strategies. Problem-solving was the most-frequently reported strategy among the IEP participants of the current research. Reported use of problem-solving in high levels support the previous findings in metacognitive strategy research. Support strategies were also used moderately. Global strategies were found to be used the least. The researcher of this study assumed that participants used metacognitive reading strategies in high frequencies. However, it is essential to remember that these metacognitive reading strategies were not taught explicitly to these students in the IEP program.

As for research question 3, no statistically significant correlations were identified between participants' placement scores, and their' reported scores on the Overall, Global Reading Strategies, Problem Reading Strategies and Support Reading Strategies. These results were inconsistent with the previous researches.

Participants' Reported Use of Metacognitive Strategies

Research question 1 (*What type of metacognitive strategies do the intermediate IEP learners report when they are reading in English?)* revealed that problem-solving was the most self-reported strategy. This result aligns with the previous studies concluded by Mokthari and Sheorey (2001a), who concluded that high problem solving strategy use was preferred among the intermediate and high proficiency level students. After doing research on 270 Chinese EFL students, Zhang and Wu (2009) also found similar findings to this study. Zhang and Wu (2009) determined that all levels of English Learners were aware of the support strategies and intermediate level learners used problem-solving strategies frequently.

In addition, Sheorey and Mokhtari (2001) asserted in their past study that problem-solving and support strategies are considered monitoring tools in metacognitive strategies and they are commonly seen in every proficiency level. Readers take deliberate actions when faced with reading problems and they come across unknown vocabulary. As a result, ESL students develop these cognitive strategies and get into the habit of using them. Similarities of the previous metacognitive research findings with the current research communicate to the researcher that the intermediate IEP students may be skilled readers because beginner level readers read fast without thinking about meaning. Low-skilled readers want to get to the end of the text to understand the general idea of the text. However, at a more advanced stage of reading proficiency, learners continue reading rigorously and slowly. Once readers slow down, they focus more on constructing meaning rather than fluent decoding (Grabe 2009). This construction may be an explanation why the participants selected item 7 (*I read slowly and carefully to make sure I understand what I am reading*) as the most preferred strategy. Moreover, Baker (2008) indicates that readers with high awareness of difficulties can cause the reader to change reading speed, or try other text to provide background information. Anderson (2008) claims that proficient students can monitor and orchestrate strategies, think about problems, and find ways to solve them by noticing the steps to take. Therefore, skilled readers need to use problem-solving and support strategies.

Research Question 2 (*What is the frequency of metacognitive reading strategies that the IEP learners report to use when they are reading in English?)* revealed that the problem-solving strategy had the highest and global strategy had the lowest frequency (Problem-solving M = 3.62 High, and 3.34-Medium) among the IEP students. Global strategies are what

Anderson (2008) calls the planning strategies such as looking at overall view of the text (look at pictures, illustrations, subtitles, and a title), purpose of the text, understanding what to ignore, and think about the content of the text. These help readers to organize their thoughts to evaluate and analyze the text faster. Learners also may check whether this text has a specific text structure such as cause and effect, compare and contrast, or persuasive and informative. Thus, analyzing the text is considered an efficient planning strategy that the IEP students reported to use in lower levels compared to their self-reported problem-solving strategies. Inefficient use of global strategies may be concerning when it comes to distinguishing skilled from unskilled readers because recent studies showed that students who were considered skilled readers reported that high skilled readers monitor reading comprehension with analyzing the text, finding main idea, skimming for the key ideas, and guessing meaning, while the low skilled participants stated that they depend on dictionary use for unknown vocabulary and translated text from L2 into L1 (Salataci & Akyel, 2002; Zhang & Wu, 2009). General understanding of a text seems to enhance the reading comprehension. Therefore, low level readers claim to be aware of support strategies the most unlike their high skilled counterparts who use global strategies more frequently (Salataci and Akyel 2002).

The research interview discovered more and profound information about their strategy choices. Although the SORS survey revealed that problem-solving was the most frequently used among the IEP students, the interview results discovered that participants rely on support strategies very frequently. Thirteen interviewees reported an awareness of a lack of vocabulary causing them to rely on dictionary most of the time. In fact, the first thing almost all students (N = 13) said was that they used their dictionaries immediately when they come

across unfamiliar words. Ten out of 14 participants seemed to be daunted by new words. These same 10 participants constantly repeated that vocabulary was an obstacle for them so they solve this problem by either with a dictionary or translating into native language (71%). Although most of the students seemed to face the vocabulary obstacle, some students tried other means such as guessing the meaning of new words and using context clues instead of relying on translation or dictionary help. Strategy choice in vocabulary comprehension displays that some students have a slightly higher awareness in monitoring strategies than their counterparts. In addition, it seemed to the researcher that paper and online dictionaries were commonly used in classrooms. Ten interviewees responded using L1 translations continually in class. This also showed the researcher that participants' lexical knowledge may not be sufficient to avoid L1 translations. Although L1 translation is a common strategy for Second Language Learners, Zhang (2001) describes 'translation into L1' as being used by low level ESL students. Since higher level learners consider this strategy as time-consuming and they have conscious focus and awareness, they do not need to understand every detail unlike the beginners. Additionally, it was also one of Zhang's (2001) findings that low skilled readers solved their problems mainly by consulting a dictionary, because low level readers felt like vocabulary knowledge was their main foundation for comprehension. Based on the interview results of the participants, the researcher revealed that respondents answered as if they were responding as low skilled readers. Also, Jiang (2000) adds to the problem of vocabulary in L2 and states that adult proficient Second Language Learners integrate lexical knowledge of specific L2 words in their mental lexicon within short time. Students with high proficiency levels find L1 information completely redundant and unnecessary (Jiang 2000).

Thus, the researcher can surmise that the IEP intermediate English participants' vocabulary may not have ample vocabulary to wean off of their L1 dictionaries.

Furthermore, new strategies discovered by the interviewees included global strategies such as skim and scan, main idea or gist, and chunk long sentences into small ones. "Global reading strategies include general strategies aimed at setting the stage for reading" (Mokhtari & Reichard, 2002, p. 252). These strategies are often used prior to reading while planning for the reading task.

Students who use main idea skills are considered skilled readers because there are too many other strategies involved in this complex process such as content knowledge, focus on meaning, predictions, inference, and background knowledge (Salataci & Akyel, 2002; Zhang, 2001; Zhang & Wu, 2009). This finding may show the researcher that the intermediate IEP students were explicitly taught these strategies or students did not the find survey questions explicit enough to select global strategies on their survey.

Another fascinating strategy that was discovered during the interview was chunking long sentences into small ones to increase comprehension (N = 8, 57%). Intermediate IEP participants stated that they use their metacognitive knowledge to decode messages via chunking big grammatical sentences into small ones. Therefore, these participants preferred these strategies for meaning-making. This was another strategy for low level language learners. Chunking was one of the low-level reader strategies in Zhang's study because proficient L2 readers did not need to detail every linguistic element in print (Zhang, 2001). Zhang (2001) posits chunking strategy as a beginner or low level strategy choice because high level readers have deeper metacognitive knowledge and awareness of global strategies.

Proficient readers do not have to focus on linguistic knowledge, content knowledge, cognitive and metacognitive knowledge as much as the low-level readers.

Participants' Reading Placement Scores and Use of Metacognitive Reading Strategies

Research question 3 (*Do the students' metacognitive awareness of reading strategy use have any correlation with their English reading placement scores?)* tried to answer the relationship between participants' self-reported metacognitive scores and their relation to participants' reading placement scores. There was non-significant relationship between the overall metacognitive strategy use and the reading placement scores of all the IEP intermediate learners ($r = 0.058$, $p = .005$). The researcher concluded that metacognitive strategies did not play an essential role in students' reading placement or reading comprehension. In addition to this, the correlation study of the current research did not confirm the studies by Zhang and Seepho (2013) and Salataci and Akyel, (2002). Zhang and Seepho (2013) found that overall use of metacognitive strategies, planning strategies, monitoring strategies and evaluating strategies were correlated with their English reading comprehension scores, respectively. Zhang and Seepho (2013) hypothesized that the more students used metacognitive strategies, the more likely they were to obtain higher scores on the reading comprehension tests. Readers who are aware of metacognitive strategies have concrete reading goals and know how to reach those goals. These conscientious students are adamant on their cognitive plans for reading activities and can change strategies when adjustments are necessary, assess themselves through their own initiative and take corrective actions when needed. In addition to Zhang and Seepho's (2013) research, Salataci and Akyel

(2002) found out that teaching metacognitive reading strategies increased their participants' reading comprehension test results as well.

Considering the contradictory results of this study, the researcher can speculate that either the participants of the current study's metacognitive awareness may not increase their reading comprehension results or intermediate L2 participants' reading skills may not be built up on the foundation of metalinguistic knowledge. In general, correlation solely portray the covariance. Therefore, we cannot conclude firm directions of cause-effect relationship regarding to the increase in metacognitive awareness and its effects on reading comprehension results.

Conclusion

Based upon the findings in this study, the researcher can offer three explanations. First, the adult intermediate IEP students reported to utilize problem-solving strategies the most followed by support and global. The participants displayed a moderate awareness of overall metacognitive strategies. The intermediate IEP learners can be considered skilled readers due to their moderate to high usage of strategy choices. Although they reported at least moderate strategy use in each category, global strategy was claimed to be the least preferred. Based on previous researches, high proficient readers use more global or top-down strategies and these strategies are more effective for reading comprehension (Mokhtari, Sheorey, & Reichard, 2008; Salataci & Akyel, 2002; Zhang, 2001).

In addition to this, IEP readers preferred cognitive strategies to ameliorate comprehension barriers and used these top strategies. However, the researcher found that they report to use strategies that are claimed to be low skilled strategies such as translating into

native language, using a dictionary, chunking big sentences into smaller units and not preferring to analyze the text. The researcher can infer that participants' lack of proficiency in English could be to blame for those less challenging strategies. Nonetheless, this research will not be able to investigate or discover whether the respondents preferred these strategies because they really wanted to put them to use or because their teachers' instruction had directed their metacognition.

Another finding was the zero correlation between the all intermediate IEP students' reading placement scores and the overall metacognitive strategy use. The discrepancy of this part of the study may be the results of the following;

The reading placement scores are taken when they first come to the United States based on a scale of 0-15. However, there were some returning students in the same summer program that the research took place who did not take the reading placement exam again to increase their scores. This may have deviated the results quite highly.

Also, the reading placement scores do not determine solely on where they will be placed since the language acquisition occurs in all four domains. So, if a student received a score of 1 in reading and he scored very high in listening, writing or speaking, he may end up being placed in the intermediate IEP classroom regardless of how low his or her reading abilities are. Variances in placing students reflect the results of the intermediate IEP reading scores. More than half of the students scored very low on the reading part of the Entrance Proficiency Test (ETP). Perhaps, they may have learned metacognitive strategies after they have taken the exam. This study will not be able to investigate further how much participants knew before getting an education in the IEP.

So, the results of the correlation study between participants' overall use of metacognitive reading strategies and participants' reading placement scores did not align with the researches that was the basis of this study (Salataci & Akyel, 2002; Zhang, 2013).

The last finding was based on the qualitative analysis of the semi-structured interviews. Respondents stated they rely on dictionaries in class and most of them translate in their native languages. And similarly, most of the students named vocabulary knowledge as an obstacle and the solitary meaning making skill in class. This is a common support strategy among the ESL students because it takes a long time to build an enough vocabulary in L2 and get that needed lexical and semantic knowledge in L2. The findings of Jiang and Zhang also aligned with this study's findings (Jiang, 2000; Zhang, 2001).

Respondents also recommended to have more time in reading assignments in class and needed more challenging novels. They felt like they are focusing on understanding the vocabulary but not learning so much about American novels, culture, or short stories that make the class thought-provoking and content-based. These findings lead to the implications for teachers, instructors and researchers.

Limitations

1. The Survey of Reading Strategies (SORS) was administered only in English, which is not the native language of the ESL students enrolled in a university in the Midwestern part of the United States of America.
2. Semi-structured interviews were conducted only in English. This may have limited to express thoughts, and opinions of the participants' metacognitive reading strategy choices.

3. Participants of this study came from various cultural and linguistic backgrounds and were categorized into one intermediate ESL group. This may have limited the findings of this study.
4. As mentioned before, participants' ethnicity and gender varied, depending on the school's demographic information in the 2016 summer semester. The results of this study regarding metacognitive awareness and strategy choice among the intermediate IEP students in the United States may not necessarily generalize to non-native English speaking students in different contexts.
5. The surveys given to participants are self-reported. Therefore, people may misstate certain things because they may not reveal themselves as honestly as expected. There are also other various reasons that affect the survey results such as personality, gender, age, and other influences. These factors may have caused the participants to change their answers.
6. Using data from test conditions is also a limitation since many of the known strategies for helping to facilitate comprehension are not available to the students.
7. Another variable that may have affected the SORS results and the interview may be direct and explicit teaching of these metacognitive strategies throughout the year. The researcher was not able to investigate if participants were aware of these strategies when they were first placed in the intermediate level courses.
8. Reading placement scores were taken when they first came to the United States and the researcher was not able to get the updated reading scores after a year of education in America.

9. Correlation method might be another limitation in this research. Correlation study can only tell us the strength between two variables or relationships such as (1) there is a positive relationship between two variables, (2) there is a strong or weak relationship, (3) there is positive, or negative correlation between samples. Correlation does not imply causation. Thus, the researcher cannot conclude that students with higher reading placement scores are aware of the metacognitive strategies or intermediate level students' reading scores show their awareness.

Chapter 6: Implications

Recommendations for Researchers

This study could be replicated with a control group because it is not possible to know exactly the extent to which the subjects' metacognitive knowledge and comprehension were influenced by instruction. The researcher could investigate how much direct metacognitive instruction helped students' reading comprehension results after the explicit metacognitive reading strategy instruction was given to students. Another comparison to this study could be made by conducting a study for participants' metacognitive strategy use of L1 and new metacognitive strategies learned in English after getting an education in America to compare what type of new strategies they report to utilize in L2.

Recommendations for Teachers

The findings of this thesis supported some of the other researches and claims that metacognitive knowledge and awareness increases reading comprehension. It is vital for teachers to impart specific strategies in the classroom. Engaging curriculum, assessment integration, consistent practice, explicit strategy instruction, and verbalizing were found to be essential in increasing metacognitive awareness (Kistner, Rakoczy, Otto, Klieme, & Buttner, 2010). With these essentials in mind, teachers first need to diagnose the problem and be aware of L2 learners' difficulties and problems. In addition, the minimal use of global reading strategies as reported in this study implied that instructors should focus on global reading strategies such as overall view of the text, critical analysis and purpose of reading. The five least frequently used strategies (see Table 16) can be viewed and do in-class exercises to improve their reading strategies.

During the last part of the interview, the researcher found out that students wished to have more rigorous reading curriculum with more resolute lesson planning by the instructor. Teachers need to be prepared and know what strategies to teach, and how students use those strategies in different context. Sometimes teachers do not realize what students use while reading a text in English. Therefore, teachers should also reflect and evaluate on their own teaching as well. Modifying based on needs and verbalizing thoughts during read a-louds is also one of the great strategies to increase metacognitive awareness (Cohen and Macaro 2007).

Another paramount scholar's work should be put into consideration for language teaching. Marzano's (2007) research on teachers and classroom effectiveness also argues that metacognitive strategies can be taught and learned. First, teachers need to evaluate and reflect on themselves. Teachers need to self-question their skills about teaching and planning that they need to have by asking-wh questions. Marzano's (2007) research showed that academic performance increases with metacognitive strategies in classrooms where students are explicitly taught how and why it is important to set learning goals (Marzano, 2007, p. 177). For instance, teachers could set easy objectives for the day for students to see and have a mind-set of the upcoming class and what they need to do before the class starts. It is a mental preparation and planning for students as well. As mentioned in this research several times, it is important to convey Anderson's (2008) metacognitive model to language classroom. His model showed that metacognitive training can be utilized by planning, evaluating and monitoring. Teachers can plan reading strategies; pre-reading, reading, and post-reading activities, have students evaluate their own mistakes and monitor their own progress.

Teachers can model reading strategies where students reflect on how they reached their learning goals for the day. Guided and independent practices in addition to classroom routines will make the learning more meaningful by pushing students to think about their own learning process. Teachers also should make routine exercises of asking students the ways or strategies to find answers of the reading texts.

Another recommendation of this study focuses on the concerns of the participants' feelings and their self-reported lack of lexical skills. One of the most important emphasis should be on vocabulary knowledge. Participants reported lack of lexical knowledge and since this constrains their engagement in classroom, teachers need to find ways to incorporate metacognitive vocabulary training. According to Rasekh and Ranjbary (2003), teachers can use CALLA (The Cognitive Academic Language Learning Approach) model to teach explicit vocabulary instruction in L2. According to CALLA model, teachers can give certain vocabulary words from the chapters, set specific goals and strategies for these words (planning). Students need to be modelled to learn strategies such as guess the meaning from the context, use cognates, inferencing, sorting words by association, collocation, and semantic mapping (Modelling). One strategy may not work for every text. Students need to practice these strategies routinely and make sure to use it to deepen learning in L2 (Practice). The next part of the metacognitive vocabulary training is evaluating their own progress by using these strategies (Monitoring and evaluating). For example; students can develop more vocabulary knowledge by vocabulary logs, discussions or checklists of strategies used and answering open-ended questionnaire to reflect on their learning process. And finally, students should be

encouraged to apply these strategies in the next reading and reflect on what strategies they like to use the best (Rasekh and Ranjbary 2003).

Finally, students need to be given clear expectations in classroom. The Intermediate level IEP students need to be aware that "self-regulation and motivation" factors play an important role in language acquisition and vocabulary development. Learners with prime motivation can always gain more knowledge and acquire more input (i+1) (Krashen 1982). All things considered, the study of metacognitive reading strategies is still at an experimental stage in second language acquisition models. Thus, more theoretical studies should be conducted to develop teaching and learning of second language reading in English.

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Appendix A: Student Background Questionnaire

1. What is your current level of English proficiency?

□ **Level 3** □**Level 4**

2. Age _____

3. Gender

□ Female □ Male

4. Level of Highest Education

□ High School Diploma □ Some College
□ Bachelor's Degree □ Graduate Degree

5. What is your first or native language?

First language: _____

6. How well do you think you read in your native language?

□ Insufficient (Beginner)
□ Average (Intermediate)
□ Good (Advanced) □ Excellent (Expert)

7. How well do you think you read in English?

□ Insufficient (Beginner)
□ Average (Intermediate)
□ Good (Advanced)
□ Excellent (Expert)

8. Have you ever studied in any other English speaking country except the United States (e.g.: Canada, UK, and Australia)?

Yes □
No □
If the answer is yes, which country/countries have you studied and how long?

9. How long have you been studying English?

……years

10. Besides your first language and English, do you know any other languages?

Yes □
No □ **If yes, which languages?**

11. How many hours per <u>day</u> do you read <u>in English</u> outside class?

I read world news	**……hours**
I read social media news	**……hours**
I read magazines	**……hours**
I watch TV with subtitles	**……hours**
I read for fun about anything	**……hours**
I read academic texts	**……hours**

12. How many hours per <u>day</u> do you read <u>in your native (home language)</u> outside class?

I read world news	**……hours**
I read social media news	**……hours**
I read magazines	**……hours**
I watch TV with subtitles	**……hours**
I read for fun about anything	**……hours**
I read academic texts	**……hours**

Appendix B: Semi-Structured Interview Questions

Modified from Global Support Strategies Questions–SORS (Survey of Reading Strategies)

1. What do you do first when you are reading a text in English? (Possible follow up questions related to question 1: Do you start reading with goals in your mind? What is your purpose for reading in English? What type of strategies do you use? Setting a purpose–elated to Item 1 in SORS)

2. Can you explain how you use certain things such as checking understanding, taking notes, underlining main ideas, use tables, figures, and pictures in text to increase understanding? (Possible follow up questions related to question 2: Explain how you could use this strategy when reading for one of your classes. List some of the things you might do. Global support strategies in SORS)

Modified from Problem Solving Strategies - SORS (Survey of Reading Strategies)

3. Can you tell me little bit about some of the strategies that you use when you do not understand the text you are reading? Problem solving strategy (Item 7, 9,11,14,16, 19, 25, 28)

4. What do you usually do if you lose your concentration while reading? (Item 9 and 16)

5. What kind of choices do you make when you come across an unfamiliar word in a text that you do not understand? (Item 28)

Modified from Support Strategies - SORS (Survey of Reading Strategies)

6. Do you use a dictionary? (Possible follow up questions related to question 6: Do you prefer English –English dictionary or English-your native language dictionary? Do you

always rely on a dictionary during reading or do you always have your dictionary out during reading? Can you tell me when you think you should use a dictionary and when not? (Item 29).

7. Tell me about a time when none of the strategies worked in English for you. What did you do? (Support Strategies general question)

Overall questions surmised from the SORS

8. What do you think is the most important thing in reading in English as a Second language (ESL)? e.g., background knowledge, English grammar, using dictionary, vocabulary size, reading slowly, comprehending main idea of text, or something else? (Possible follow up questions related to question 8: Based on your perception, what do you think is the biggest obstacle that you face while reading in English?)

Teacher& pedagogical implications questions

9. Did your teacher teach you any reading strategies, skills or things like these? (Possible follow up questions related to question 9: Do you think these strategies would help you read better in English?)

10. Do you use any other strategies that you can think of?

11. If you could ask your instructors to do one thing differently to help you with reading, what would it be?

12. Is there anything else you would like to add?

These questions are created based on Mokthari and Sheorey (2002)'s survey, Survey of Reading Strategies. Mokhatri, K., & Sheorey, R. (2002). Measuring ESL Students' Awareness of Reading Strategies. Journal of Developmental Education, 25(3), 2

Appendix C: Survey of Reading Strategies

SURVEY OF READING STRATEGIES
Kouider Mokhtari and Ravi Sheorey, 2002

The purpose of this survey is to collect information about the various strategies you use when you read **school-related academic materials in ENGLISH** (e.g., reading textbooks for homework or examinations; reading journal articles, etc.). Each statement is followed by five numbers, 1, 2, 3, 4, and 5, and each number means the following:

'1' means that 'I **never or almost never** do this'.
'2' means that 'I do this **only occasionally**'.
'3' means that 'I **sometimes** do this'. (About **50%** of the time.)
'4' means that 'I **usually** do this'.
'5' means that 'I **always or almost always** do this'.

After reading each statement, ***circle the number*** (1, 2, 3, 4, or 5) which applies to you**.** Note that there are **no right or wrong responses** to any of the items on this survey.

Statement	**Never**				**Always**
1. I have a purpose in mind when I read.	1	2	3	4	5
2. I take notes while reading to help me understand what I read.	1	2	3	4	5
3. I think about what I know to help me understand what I read.	1	2	3	4	5
4. I take an overall view of the text to see what it is about before reading it.	1	2	3	4	5
5. When text becomes difficult, I read aloud to help me understand what I read.	1	2	3	4	5
6. I think about whether the content of the text fits my reading purpose.	1	2	3	4	5
7. I read slowly and carefully to make sure I understand what I am reading.	1	2	3	4	5
8. I review the text first by noting its characteristics like length and organization.	1	2	3	4	5
9. I try to get back on track when I lose concentration.	1	2	3	4	5
10. I underline or circle information in the text to help me remember it.	1	2	3	4	5
11. I adjust my reading speed according to what I am reading.	1	2	3	4	5
12. When reading, I decide what to read closely and what to ignore.	1	2	3	4	5
13. I use reference materials (e.g. a dictionary) to help me understand what I read.	1	2	3	4	5
14. When text becomes difficult, I pay closer attention to what I am reading.	1	2	3	4	5
15. I use tables, figures, and pictures in text to increase my understanding.	1	2	3	4	5
16. I stop from time to time and think about what I am reading.	1	2	3	4	5
17. I use context clues to help me better understand what I am reading.	1	2	3	4	5
18. I paraphrase (restate ideas in my own words) to better understand what I read.	1	2	3	4	5
19. I try to picture or visualize information to help remember what I read.	1	2	3	4	5
20. I use typographical features like bold face and italics to identify key information.	1	2	3	4	5
21. I critically analyze and evaluate the information presented in the text.	1	2	3	4	5
22. I go back and forth in the text to find relationships among ideas in it.	1	2	3	4	5
23. I check my understanding when I come across new information.	1	2	3	4	5
24. I try to guess what the content of the text is about when I read.	1	2	3	4	5
25. When text becomes difficult, I re-read it to increase my understanding.	1	2	3	4	5
26. I ask myself questions I like to have answered in the text.	1	2	3	4	5
27. I check to see if my guesses about the text are right or wrong.	1	2	3	4	5
28. When I read, I guess the meaning of unknown words or phrases.	1	2	3	4	5
29. When reading, I translate from English into my native language.	1	2	3	4	5
30. When reading, I think about information in both English and my mother tongue.	1	2	3	4	5

Appendix D: IRB Approval

OFFICE OF RESEARCH AND SPONSORED PROGRAMS
ST. CLOUD STATE UNIVERSITY.

Institutional Review Board (IRB)

Administrative Services 210
Website: stcloudstate.edu/osp *Email: osp@stcloudstate.edu*
Phone: 320-308-4932

Name: Gulhan Miller

Address 2225 Viking Dr.
St. Cloud, MN 56301 USA

Email: gulhancakcak@gmail.com

IRB PROTOCOL DETERMINATION:
Expedited Review-1

Project Title: Metacognitive Awareness and Reading Strategy use: Investigation on Intermediate ESL Learners' Awareness of Metacognitive Strategies use for Reading Comprehension

Advisor John P. Madden

The Institutional Review Board has reviewed your protocol to conduct research involving human subjects. Your project has been: **APPROVED**

Please note the following important information concerning IRB projects:

- The principal investigator assumes the responsibilities for the protection of participants in this project. Any adverse events must be reported to the IRB as soon as possible (ex. research related injuries, harmful outcomes, significant withdrawal of subject population, etc.).

- For expedited or full board review, the principal investigator must submit a Continuing Review/Final Report form in advance of the expiration date indicated on this letter to report conclusion of the research or request an extension.

-Exempt review only requires the submission of a Continuring Review/Final Report form in advance of the expiration date indicated in this letter if an extension of time is needed.

- Approved consent forms display the official IRB stamp which documents approval and expiration dates. If a renewal is requested and approved, new consent forms will be officially stamped and reflect the new approval and expiration dates.

- The principal investigator must seek approval for any changes to the study (ex. research design, consent process, survey/interview instruments, funding source, etc.). The IRB reserves the right to review the research at any time.

Good luck on your research. If we can be of further assistance, please contact the Office of Research and Sponsored Programs at 320-308-4932 or email lidonnay@stcloudstate.edu. Use the SCSU IRB number listed on any forms submitted which relate to this project, or on any correspondence with the IRB.

Institutional Review Board:

Linda Donnay
IRB Administrator
Office of Research and Sponsored Programs

St. Cloud State University:

Marilyn Hart
Interim Associate Provost for Research
Dean of Graduate Studies

OFFICE USE ONLY

SCSU IRB# 1497 - 1856	**Type:** Expedited Review-1	**Today's Date:** 10/21/2015
1st Year Approval Date: 10/13/2015	**2nd Year Approval Date:**	**3rd Year Approval Date:**
1st Year Expiration Date: 10/12/2016	**2nd Year Expiration Date:**	**3rd Year Expiration Date:**