

# ผลของการสอนกลวิธีการอ่านอภิปัญญาที่มีต่อการอ่าน เพื่อความเข้าใจและความตระหนักรู้ในการใช้กลวิธี การอ่านของนักเรียนระดับชั้นมัธยมศึกษาปีที่ 4

## Effects of Metacognitive Reading Strategy Instruction on EFL Tenth Grade Students' Reading Comprehension and Reading Strategy Awareness

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### บทคัดย่อ

การวิจัยนี้มีวัตถุประสงค์เพื่อ 1) เปรียบเทียบความสามารถในการอ่านเพื่อความเข้าใจก่อนและหลังการสอนกลวิธีการอ่านอภิปัญญา 2) เปรียบเทียบการใช้กลวิธีการอ่านอภิปัญญาของผู้เรียนก่อนและหลังการสอนและ 3) ศึกษาความพึงพอใจของผู้เรียนเกี่ยวกับการสอนกลวิธีการอ่านอภิปัญญา การวิจัยนี้ใช้ระเบียบวิธีวิจัยแบบผสมผสานวิธีที่มีการเก็บรวบรวมข้อมูลทั้งข้อมูลที่เป็นปริมาณ และข้อมูลที่เป็นคุณภาพโดยมีเครื่องมือที่ใช้ในการเก็บรวบรวมข้อมูลประกอบด้วย 1) แบบสอบถามความตระหนักรู้ในการใช้กลวิธีการอ่านอภิปัญญา (The Survey of Reading Strategies) (SORS) ซึ่งผู้วิจัยได้ดัดแปลงมาจาก The Survey of Reading Strategies 2 (SORS) 55 ที่พัฒนาขึ้นโดย Mokhtari and Sheorey (2002) 2) แบบทดสอบการอ่านเพื่อความเข้าใจ (The Reading Comprehension Test) และ 3) แบบสัมภาษณ์กึ่งโครงสร้าง โดยผู้วิจัยได้ทดลองกับกลุ่มตัวอย่างที่เป็นผู้เรียน ซึ่งกำลังศึกษาอยู่ในระดับชั้นมัธยมศึกษาปีที่ 4 ภาคเรียนที่ 1 ปีการศึกษา 2560 โรงเรียนเทพศิรินทร์ จำนวน 50 คน ระยะเวลา 10 สัปดาห์ แล้วนำข้อมูลมาวิเคราะห์เพื่อหาค่าเฉลี่ย ค่าส่วนเบี่ยงเบนมาตรฐาน และการทดสอบที (t-test) ผลการวิจัยพบว่า 1) ความสามารถในการอ่านเพื่อความเข้าใจของผู้เรียนหลังการสอนกลวิธีการอ่านอภิปัญญาสูงกว่าก่อนการสอนกลวิธีการอ่านอภิปัญญา อย่างมีนัยสำคัญทางสถิติที่ระดับ .05 2) การใช้กลวิธีการอ่านอภิปัญญาของผู้เรียนหลังการสอนกลวิธีการอ่านอภิปัญญาสูงกว่าก่อนการสอนกลวิธีการอ่านอภิปัญญา อย่างมีนัยสำคัญทางสถิติที่ระดับ .05 และ 3) ผู้เรียนมีความพึงพอใจต่อการสอนการใช้กลวิธีการอ่านอภิปัญญาในระดับดี

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## Abstract

This study aims to: 1) compare Thai secondary school learners' English reading comprehension abilities before and after teaching metacognitive strategies; 2) compare the use of metacognitive strategies of Thai learners before and after teaching and 3) explore learners' opinions about metacognitive reading strategy instruction (MRSI) by using a sequenced mixed-method research methodology. The study involved a ten-week intervention with 50 EFL learners in a public secondary school. Data from pretest and posttest measurements and semi-structured interviews was collected to investigate the effectiveness that the intervention on EFL learners' reading comprehension abilities and reading strategy awareness. The data was analyzed to find the mean, standard deviation, and t-test. The results of the study revealed that: 1) the English reading comprehension abilities of the learners after implementing the metacognitive reading strategy instruction (MRSI) was higher than before implementing the metacognitive reading strategy instruction (MRSI) at the .05 level of statistical significance. 2) Using the metacognitive strategies of the students after teaching the metacognitive strategies was higher than before the teaching of metacognitive readings at the .05 level of significance. 3) The learners were satisfied with the teaching of the use of metacognitive reading strategy instruction (MRSI) to a good level.

## Introduction

Reading instruction is an indispensable part of every foreign language teaching syllabus because reading skills are the cognitive processes that readers embark on to make sense of a text. Moreover, reading comprehension is a complicated mental process requiring both bottom-up and top-down cognitive involvement (Anderson & Cheng, 1999). Fluent reading requires the simultaneous utilization and coordination of several cognitive processes and sources of knowledge (Tighe & Schatschneider, 2014). Comprehending a text correctly is a challenge for readers in a second or foreign language for good reason. In first language (L1) reading, readers deal with solely one language, while in a foreign language (L2) reading, learners should process at least two languages simultaneously; one of which

is the native language the other being the foreign language (Birch, 2014).

Regarding cognitive learning, the study of metacognition originated in the field of cognitive development, especially developmental psychology (Flavell, 1981) and information-processing cognitive psychology (Wagner and Sternberg, 1984). Flavell (1981) appears to be the first one, in early 70's, to define metacognition as knowledge of one's learning that consists of two elements: (1) metacognitive knowledge - that is "knowledge of cognition", and (2) regulation of cognition - that is "strategy use." Similarly, Brown (1981) describes metacognition as the deliberate conscious control of one's own cognitive action. According to Flavell's (1981) definition, Baker and Brown (1984) further note that there are two

types of metacognitive activities: (1) those that concern a person's knowledge about his or her own cognitive resources and the compatibility between the learner and the learning situation, and (2) those that regulate and modify the process of a cognitive activity. Koda (2005) summarized metacognition as knowledge of recognition which refers to a learner's understanding and control of his or her own thinking and learning.

Concerning learning strategy, strategy training in language learning has been topical since 1970s and several studies have been done on identifying the strategies used by both successful and less successful learners. Lately, there is an increasing interest in the role of metacognition on reading instruction. While previous reading research studies have focused on reading strategies use among good and poor readers, researchers are examining readers' awareness of strategies during the reading process—their metacognitive awareness. Metacognitive knowledge or awareness is the knowledge about learners' themselves, the tasks they face, and the strategies they use (Baker and Brown, 1984). Applying metacognition in the language learning field, it refers to the action that one uses for planning, organizing, evaluating, and monitoring of his or her language learning (O'Malley and Chamot, 1990). Followed by metacognitive studies in the L1 context, second language researchers have also drawn to an increasing attention on metacognitive strategies in second language learning, especially in the reading domain. Many second language reading researchers have pointed out that the

positive correlation of proficient second language readers with more awareness of using appropriate reading strategies in English reading tasks (Barnett, 1988; Devine, 1993; Kern, 1989). Moreover, several researchers (Carrell, 1998; Cordero-Ponce, 2000; Sheorey and Mokhtari, 2001) assert that in order to make reading strategies effective in the reading process, metacognitive awareness or metacognition must be employed. This "metacognitive awareness" refers to knowledge of strategies as well as controlling this knowledge of action in the reading process (Carrell et al., 1989). In response to this positive relationship between metacognitive reading strategies and reading comprehension, many second language instructors began training second language learners with metacognitive reading strategies and the results suggested that metacognitive reading strategy instruction brings positive outcomes in language learner's metacognitive awareness and reading comprehension. Recent studies have begun to focus on metacognition, i.e., cognition of cognition (e.g., Alsheikh & Mokhtari, 2011; Pressley, 2002; Sheorey & Mokhtari, 2001) in a quest to explore potential associations among metacognitive awareness, strategy use, and reading comprehension. Seeking for the best methods or techniques that the learners choose to implement while reading is the major goal of research in the areas related to the reading strategies (Baker, 2008; Mokhtari & Reichard, 2002; Pressley, 2002; Soleimani & Hajghani, 2013). To be particular, effective reading usually involves metacognition. Baker and Brown (1984) suggest

that the following strategies are typically used by good readers during the reading process: adjusting reading rate, skimming, or being aware of and revision the materials. Specifically, metacognitive reading strategies refer to procedures that one uses for monitoring his or her own reading processes including evaluating the effectiveness of cognitive strategies being used in reading.

Moreover reading strategies are important for EFL students because the limited opportunity in accessing English make English reading strategies equally important to EFL students, English written materials become major resources and language input for them to learn and acquire English. Reading is a valuable source of language input for language acquisition (Bernhardt, 1993). Thus, reading strategies should be emphasized in the initial stages of language learning. EFL students need to know or learn how to read with ease in order to be motivated to read more English materials to build up their English ability.

In Thailand, the government has made English education a priority to enhance Thai's economic competition. For more than a decade, the Thai government declared that English instruction would be extended beginning in the 1st grade instead of the 6th grade as of 2001. However, receiving English instruction five years earlier doesn't guarantee for successful language learning, what is important is that EFL students should be taught how to learn English strategically. Inability to read English effectively has not only caused Thai students to experience barriers to academic success, but has also disadvantaged

them in their career performance or in gaining access to the latest trend of ASEAN community. There is evidence showing that reading strategies were not widely taught in high schools or middle schools in Thailand and EFL students hoped that reading strategies would be taught to them. Despite the consensus on the relevance of cognitive strategies, metacognitive awareness and reading comprehension (Abraham & Vann, 1987; Chamot & Kupper, 1989; Pressley, 2002), there are limited studies investigating direct effects of instruction of reading comprehension metacognitive strategies on the quality of Thai students' reading comprehension. To bridge this gap in the literature, this study aimed to investigate the effect of introducing metacognitive reading strategy instruction (MRSI) to EFL secondary school students on their reading comprehension and reading strategies awareness.

## Literature review

### Reading Comprehension in L2

Reading and listening are processes in which one needs to not only understand the literal meaning, but also to comprehend the implied notions (Baker, 2008). Tierney (2005) holds that learning to read is not only learning to recognize words; it is also learning to make sense of texts. Anderson (2003) considers reading the interaction of four things including the reader, the text, the fluent reading, and strategic reading. Wallace (2005) argues that teachers need to assist language learners to critically question the information content and the tacit ideological assumptions that the writer suggests. In other words, proficient

readersthink about what they are reading, analyze it and take the necessary steps to comprehend thetext, and this process is very imperative in L2 reading instruction (Huang & Nisbet, 2012).

According to Nunan (1991), reading in the traditional view is basically a matter of decoding a series of written symbols into their aural equivalents in the quest for making sense of the text. He referred to this process as the bottom-up view of reading. McCarthy (1999) has called this view outside-in processing; underscoring the notion that meaning exists in the printed page and is interpreted by the reader. This model of reading has been criticized as being insufficient and amiss owing to the fact that it heavily relies upon the formal features of the language, namely, words and structure.

On the other hand, the schema theory of reading takes a cognitive view of reading. Rumelhart (1994) describes schemata as building blocks of cognition that are used in the process of interpreting sensory data, in retrieving information from memory, in organizing goals, in designating resources and strategies, and in monitoring the flow of the mental processing system. Rumelhart (1994) further adds that if our schemata are incomplete and do not provide an understanding and meticulous analysis of the incoming data from the text, we will have problems of processing the words and understanding the text. However, according to Block (1992:322), currently, the debate is heated over “whether reading is a bottom-up, language-based process or a top-down, knowledge-based process”. Block (1992) further adds that, the stream of research has now

advanced towards more detailed investigation of the direct control that readers exert while trying to comprehend a text. This control is referred to as metacognition by Block (1992). Metacognition involves thinking about what one is doing while reading (Pressley, 2002). Fluent readers think about what they are reading and take all the necessary steps to comprehend the text, and this process is very important to EFL students.

As thus, successful language learners must possess the ability to monitor, evaluate, and control their thinking (Koda, 2007). Various definitions of reading strategies have been cited in the literature. For instance, Pearson, Roehler, Dole, and Duffy (1992), defined reading strategies as conscious and flexible plans that readers apply and adapt to particular texts and situations. Wellman (1988:5) argued that a strategy has to be “employed deliberately, with some awareness”. Paris et al. (1991: 610) defined reading strategies as “a wide range of tactics that readers use to engage and comprehend text.

### **Metacognitive Strategies and L2 Comprehension**

Metacognitive reading strategy awareness plays a significant role in reading comprehension because it has become one of the effective ways to facilitate learners reading comprehension in the field of second / foreign language studies. Therefore, the interest in the area of metacognitive awareness of reading strategies has been blooming lately (Iwai, 2007). One recent example is from Alsheikh and Mokhtari (2011) who examined how native Arabic-speaking college students used reading

strategies while reading English. They concluded that raising the awareness of reading strategies through explicit teaching proves enormously useful in EFL classrooms. Zhang (2001) hold that, while students are generally aware of the usefulness of the strategies, they are not conscious and confident strategy users; indicating a need to enhance the strategies repertoire at their disposal. Mayer (1998) highlighted the importance of metacognition by stating that metacognitive awareness is a predictor of effective problem solving, together with skill and motivation.

Devine (1993) and Flavell (1981) described metacognitive strategies in reading as strategies that are applied to monitor or regulate cognitive strategies. Devine (1993:108) commented that skimming a text for key information involves "the usage of cognitive strategy, whereas assessing the effectiveness of skimming for gathering textual information would be a metacognitive strategy". Metacognitive reading strategies are generally classified into three groups: planning (pre-reading), monitoring (during reading), and evaluating (postreading) strategies (Alsheikh & Mokhtari, 2011; Anderson, 2003; Baker, 2008; Devine, 1993; Iwai, 2007), and each group has a variety of strategies that require metacognitive processing on the part of readers (Pressley, 2002).

Research on metacognition has revealed that less proficient learners do not learn the purpose of reading and tend to focus on word-by-word reading instead of reading for meaning (Soleimani & Hajghani, 2013; Takallou, 2011). Harris et al. (1988) added that poor

readers usually finish reading passages without even knowing that they have not comprehended them. Moreover, poor readers are less competent at adjusting their reading rate to fulfil the purpose of reading (Block, 1992). When they fail to understand a text, poor readers are not as flexible as fluent readers in utilizing and coordinating different strategies to solve the problem (Garner & Kraus, 1982; Takallou, 2011). Langer (1984) maintains that poor readers are less successful in monitoring their understanding of the material read or are deficient in effective use of metacognitive skills. On the contrary, Pressley, Borkowski, and Schneider (1989) stressed that good readers automatically undertake metacognitive strategies to focus their attention, to derive meaning, and to make adjustments when something goes amiss. Harris et al. (1988) asserted that readers who have higher metacognitive skills are able to check for confusion or inconsistency, employ a corrective strategy, such as rereading, relating different parts of the passage to one another, look for topic sentences or summary paragraphs, and relating the current information to their past knowledge. Harris et al. (1988) further added that metacognitively competent readers do not classify these skills while performing them but if asked, they can give an account of their metacognitive processes properly. They have a conscious awareness of their own knowledge and the conscious ability to understand, monitor, and handle their own cognitive processes (Harris et al., 1988). Pressley, Borkowski, and Schneider (1989) concluded that since metacognitive strategies are inherently conscious and potentially malleable; learners with

good metacognitive skills are able to monitor and direct their own learning processes efficiently.

### Methodology

Three research questions were employed to guide the study. The first two research questions focused on the quantitative data of the study while the other one is used for the qualitative investigation. They are: 1) Does metacognitive reading strategy training affect EFL secondary school students' reading comprehension and reading strategy awareness?; 2) Does metacognitive reading strategy training encourage EFL secondary school students to use more reading strategies?; and 3) What are the EFL secondary school students' opinions on metacognitive reading strategy instruction? For this study, the research hypotheses were "H01: after the metacognitive reading strategy instruction, the students' reading comprehension mean score of the post-test was significantly higher than that of the pre-test" and "H02: after the metacognitive reading strategy instruction, the students significantly used more reading strategies."

A one-group pretest-posttest design with an experimental explanatory study with a mixed methods approach was used for data collection. Both quantitative and qualitative data aimed to examine the effect of MRSI on EFL students' reading experience by integrating MRSI into English reading class. The research site was a secondary boys' school in Bangkok. The participants of this study were 50 tenth grade students. They were all purposively selected. The school is a public secondary school located

in Bangkok, in the center of Thailand. Among these students, all were boys aged of 15-16. They alternatively came to the classroom and gave a lot of cooperation when metacognitive strategy training was conducted for 10 weeks. Three research instruments were used in this study: 1) the 60-item multiple-choice test of reading comprehension, which was developed by the researcher, 2) the Survey of Reading Strategies (SORS), a questionnaire used to assess students' metacognitive reading strategies awareness adapted from The Survey of Reading Strategies Questionnaire (SORS) developed by Mokhtari and Sheorey (2002), and 3) a semi-structured interview conducted by the researcher. The independent variable in this study was metacognitive reading strategy instruction. The dependent variables in this study were the learners' reading comprehension and opinions on metacognitive reading strategy instruction. The dependent t-test analysis was used to test hypotheses from H01 to H03 with the pretest score and the posttest score of the SORS, and reading comprehension score as the dependent variables. Data analysis employed mean, standard deviation, and t-test.

A sequential mixed method approach was used to better understand the whole impact of MRSI by first quantitatively conducting the experiment and later qualitatively explaining the real life context in which it occurred. Qualitative data was collected from ten students who participated in semi-structured open-ended interview conducted by the researcher. The interview questions were written out in advance exactly the

way they were to be asked during the interview and themes were determined and reported in a descriptive format. The interview was audio taped and transcribed into English for further analysis. The data were analyzed using content analysis.

**Results**

In order to determine the efficacy of the

intervention, students' pretest and posttest scores of reading comprehension tests were analyzed to examine if there was a statistical difference between pre-test and post-test. The results in Table 1 indicate that the overall average of post-test was much higher than the pre-test. And the dependent t-test analysis shows a statistically significant difference of the two tests score at the

**Table 1:** Students' Pre- and Post-test of Reading Comprehension Scores

	$\bar{x}$	S.D.	n	t-value	Sig.
Pre-test	33.12	5.93	50	14.58	.000
Post-test	43.56	7.34	50		

p<.05

Regarding reading strategies, the results show that the overall average of metacognitive reading strategies used by the students before the intervention training was 3.14 and improved to 3.50. After the instruction, the students clearly used metacognitive reading strategies more often than before the training, with the different level of interpretation (using them at the high level).

The results also show that three strategies with the highest mean scores after the instruction included (17) I use context

clues to help me better understand what I am reading, (28) When I read, I guess the meaning of unknown words or phrases and (14) When text becomes difficult, I pay closer attention to what I am reading. The averages are 4.12, 3.94 and 3.86 respectively, while the lowest mean score was (21) I critically analyze and evaluate the information presented in the text with average of 2.94. Summary of the results was shown in Table 2.

Table 2: Pre- and Post- Scores of Students' Metacognitive Reading Strategies

Metacognitive Reading Strategies	Pretest		Posttest	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
1. I have a purpose in mind when I read.	2.98	1.35	3.76	0.93
2. I take notes while reading to help me understand what I read.	2.94	1.29	3.38	1.04
3. I think about what I know to help me understand what I read.	2.82	1.24	3.44	0.90
4. I take an overall view of the text to see what it is about before reading it.	3.14	1.11	3.54	1.14
9. I try to get back on track when I lose concentration.	3.06	1.41	3.48	1.25
10. I underline or circle information in the text to help me remember it.	3.20	1.18	3.78	1.03
11. I adjust my reading speed according to what I am reading.	3.22	1.14	3.72	0.98
12. When reading, I decide what to read closely and what to ignore.	2.62	1.34	3.54	0.96
13. I use reference materials (e.g. a dictionary) to help me understand what I read.	3.56	1.12	3.08	1.35
14. When text becomes difficult, I pay closer attention to what I am reading.	3.46	1.08	3.86	0.94
15. I use tables, figures, and pictures in text to increase my understanding.	3.26	1.07	3.68	1.03
16. I stop from time to time and think about what I am reading.	3.34	1.23	3.54	1.10
17. I use context clues to help me better understand what I am reading.	3.60	1.06	4.12	0.77
18. I paraphrase (restate ideas in my own words) to better understand what I read.	2.68	1.36	3.02	1.36
19. I try to picture or visualize information to help remember what I read.	3.06	1.21	3.66	1.07
20. I use typographical features like bold face and italics to identify key information.	3.56	1.13	3.56	1.30
21. I critically analyze and evaluate the information presented in the text.	2.28	1.10	2.94	1.14
22. I go back and forth in the text to find relationships among ideas in it.	3.04	1.18	3.28	1.22
23. I check my understanding when I come across new information.	3.10	1.27	3.10	1.27
24. I try to guess what the content of the text is about when I read.	3.50	1.08	3.50	1.08
25. When text becomes difficult, I re-read it to increase my understanding.	3.54	1.04	3.70	1.04
26. I ask myself questions I like to have answered in the text.	3.30	0.98	3.24	1.07
27. I check to see if my guesses about the text are right or wrong.	3.02	1.35	3.50	1.08
28. When I read, I guess the meaning of unknown words or phrases.	3.68	0.99	3.94	0.79
29. When reading, I translate from English into my native language.	2.94	1.42	3.56	1.17
30. When reading, I think about information in both English and my mother tongue.	3.38	1.06	3.48	0.98
<b>Total</b>	<b>3.14</b>	<b>1.25</b>	<b>3.50</b>	<b>1.12</b>

Students' reading strategies awareness was assessed through their responses on the Survey of Reading Strategies (Mokhtari and Sheorey, 2002) before and after the treatment. As shown in Table 2, the mean score of pretest for the SORS for the entire sample was 3.14 with a standard deviation of 1.25. Overall, the participants' reading strategy awareness on the

pre-test ranged from 2.28 to 3.68 with a mean score of 3.14, while the post-test ranged from 2.94 to 4.12 with a mean score of 3.50.

In order to find out whether the students' overall average of metacognitive reading strategies use increased significantly after the instruction, the pre-and post scores were analyzed as shown in Table 3.

**Table 3:** Pre- and Post- Metacognitive Reading Strategies from the Survey questionnaire SORS

	$\bar{X}$	S.D.	n	t-value	Sig.
Pre-Meta. Strategies use	3.14	1.25	50	5.26	.000
Post- Meta. Strategies use	3.50	1.12	50		

p<.05

The results in Table 3 indicate that the mean score or average of the post-metacognitive reading strategies was obviously higher than the mean score of the pre-metacognitive reading strategies. The dependent t-test analysis shows a statistically significant difference between the pre-and post-metacognitive reading strategies at the level of .05. That means the students turned out to use more metacognitive reading strategies after training.

The qualitative analysis from the semi-structured interview revealed that participants perceived that metacognitive strategies were very useful and helped them read passages or texts more effectively. Moreover, the participants were convinced that these strategies helped them be more careful and became more confident to use reading strategies while they were reading. The results indicated that participants had positive view regarding effectiveness of the

instruction of metacognitive strategies. In addition, the participants agreed that, learning and practicing metacognitive strategies can enhance their reading abilities, with some participants who remarked that these reading strategies were very difficult to understand.

### Conclusion and Discussion

Based on the findings of this study, the researcher observed three important points, namely, 1) the effectiveness of teaching metacognitive strategies on learners' reading comprehension abilities, 2) increasing awareness of these strategies after twelve training sessions, and 3) learners' perspectives on teaching metacognitive strategies. Conclusion and discussion were as follows.

1. The major aim of the present study was to explore the effectiveness of metacognitive strategies instruction on the reading comprehension

performance of the EFL learners. As it was shown, the overall average of posttest scores of reading comprehension tests was much higher than the pre-test after the intervention. Thus, the metacognitive strategy instruction seems to have contributed to the improvement of learners' reading comprehension performance. In other words, the explicit instruction and practice the learners received about how to plan and how to monitor their reading contributed to this improvement.

In addition, the findings of this study are consistent with the results of other empirical studies on the effects of strategy instruction on reading comprehension performance (e.g. Baker, 2008; Cross & Paris, 1988; Mokhtari & Reichard, 2002; O'Malley, 1987; Pressley, 2002; Zhang, 2010). The findings also corroborate the results of other similar studies that investigated the effectiveness of the instruction of metacognitive strategies in language teaching (e.g., Anderson, 2002; Salataci, & Akyel, 2002; Wang, Spencer & Xing, 2009). In his study, Anderson (2002) concluded that the use of metacognitive strategies shapes one's creative thinking and can lead to higher and better performance. Students who make use of a wide range of metacognitive skills perform better on reading comprehension tasks. Moreover, the findings of this study are also dovetailed by the results of the study which was undertaken by Khonamri and Ahmadi (2014). They investigated the effect of metacognitive and reading comprehension strategy training on reading ability of Iranian Elementary EFL learners. Their results unfolded that the participants' reading competency in the two experimental groups increased significantly.

2. An explicit instruction of metacognitive reading strategies influenced students' reading comprehension and reading awareness. In addition to measureable gains on their pre/post reading comprehension assessment, evidently the EFL learners in this study were able to show their increasing metacognitive strategy awareness as the study went on. In two months of metacognitive reading strategy instruction, this study indicated a statistical difference in reading comprehension of most EFL secondary students, regardless of their foreign language proficiency. In this respect, it has been asserted that metacognitive strategy instruction results in improved performance in learners' reading comprehension and their awareness (Devine, 1993; Grabe, 1991; Zhang, 2010).

3. This study provided evidence that metacognitive reading strategy instruction, which has been proven effective for L1 students, can also improve EFL students' reading comprehension. The prominent feature of this study is that while most studies on metacognitive reading strategy instruction measure the success of ESL/EFL students' reading comprehension solely by quantitative reports, this one has tried to balance the statistical findings with the qualitative explanations of how students thought about metacognitive reading strategy instruction. And qualitative data analysis revealed that metacognitive strategies were very useful and helped the participants read passages or texts more effectively. Moreover, these strategies helped them be more careful and became more confident to use reading strategies while they were reading.

4. A thorough content analysis was carried out on all transcripts of the semi-structured interviews. Participants were questioned about their perspectives regarding teaching metacognitive strategies. The results indicated that participants have positive view regarding effectiveness of the instruction of metacognitive strategies. The students agreed that, learning and practicing metacognitive strategies could enhance their reading ability, with some students who remarked that these reading strategies were very difficult to understand. This may be attributed to the fact that learning some strategies are difficult. The findings of this study proved that one of the reasons that students have lack of knowledge about the effectiveness of these strategies might be their unfamiliarity with the strategies. When they become familiar with the influence of these strategies in the process of reading, their perspective has changed and they became eager to learn how these strategies facilitate their reading abilities. This study provides supportive evidences that effective metacognitive reading strategy instruction can also improve EFL students' English reading achievement.

#### Recommendations

Results from the study of effects of Metacognitive Reading Strategy Instruction on students' reading comprehension and reading strategy awareness has led to recommendations for pedagogical implications and recommendations for future research as follows:

#### Recommendations for Pedagogical Implications

1. Having metacognitive knowledge for selecting and using relevant strategies means that learners are not only thinking about texts but also consciously reflect on the reading process. Therefore, the explicit instruction of metacognitive strategies has contributed to the learners' abilities in reading comprehension. In order to improve the learners' reading abilities, we should introduce them metacognitive strategies, and require them to apply and practice these strategies effectively.

2. Increasing the use of strategies after receiving the instruction shows the value and usefulness of these strategies. This might be because a consistent training on these strategies could make the learners be accustomed to using the strategies automatically when they comprehend a text.

3. Furthermore, the information gained during interview regarding students perspective about learning metacognitive strategies shows that, students who become familiar with these strategies have positive perspective about their effectiveness. Therefore, in educational setting significant emphasis must be placed on readers' positive view toward reading.

#### Recommendations for Future Research

1. The present study used a one group pretest and posttest design, thus it is challenging to compare how two groups of learners' reading comprehension abilities with and without metacognitive strategy instruction are different.

2. Due to the limitation of this research that the teaching approach was not one of the

independent variables, therefore, it is necessary to investigate the effects of particular pedagogical approaches used to instruct the metacognitive strategies on reading comprehension for the future research.

3. Another suggestion is to use specific reading passages to quantitatively and qualitatively examine and understand students' metacognitive awareness and reading strategies. This study was limited to examine participants' awareness and use of reading approaches for academic purposes in general. Students at different academic levels read a variety of reading materials, whose range of topics and difficulty vary by majors and academic levels; therefore, focusing on specific reading passages to measure students' use of reading approaches may help to better understand their metacognitive processes.

#### Acknowledgements

I would like to thank my English Reading and Writing 1 class of 2017 who agreed to participate in this study. My sincere gratitude goes to my department colleagues at Debsirin School and computer staff who shared some useful ideas and helped me analyze the data. Finally, go to Assist. Prof. Dr. Wipada Prasansaph for her editorial assistance.

#### References

- Abraham, R., & Vann, R. (1987). Strategies of two language learners: A case study. In A. Wenden & J. Rubin (Eds.), *Learner strategies in language learning* (pp. 85-102). Englewood Cliffs: Prentice-Hall.
- Anderson, N. J. (2003). Teaching Reading. In D. Nunan (Ed.), *Practical English Language Teaching* (pp. 67-86). New York: McGraw Hill Publishers.
- Anderson, N. J., & Cheng, X. (1999). *Exploring second language reading: Issues and strategies*. Boston, MA: Heinle & Heinle.
- Alsheikh, N. O., & Mokhtari, K. (2011). An examination of the metacognitive reading strategies used by native speakers of Arabic when reading in English and Arabic. *English Language Teaching* 4(2): 151-160.
- Anderson, N.J. (2002). The role of meta-cognition in second language teaching and learning. *ERIC Digest* 2(1): 3-4.
- Anderson, N. J., & Cheng, X. (1999). *Exploring second language reading: Issues and strategies*. Boston, MA: Heinle & Heinle.
- Baker, L. (2008). Metacognitive development in reading: Contributors and consequences. In K. Mokhtari & R. Sheorey (Eds.), *Reading strategies of first and second – language learners: See how they read* (pp. 25-42). Norwood, MA: Christopher-Gordon.

- Baker, L., & Brown, A. L. (1984). Metacognitive skills and reading. In P. D. Pearson, M. Kamil, R. Barr, & P. Mosenthal (Eds.), *Handbook of reading research 1*, (pp. 353-394), New York, NY: Longman.
- Barnett, M. A. (1988). Reading through context: How real and perceived strategies use affects L2 comprehension. *Modern Language Journal* 72: 150-162.
- Bernhardt, E.B. (1993). *Reading development in a second language*. Norwood, NJ: Ablex.
- Birch, B. M. (2014). *English L2 reading: Getting to the bottom*. New York. Routledge.
- Block, E. (1986). The Comprehension strategies of second language readers. *TESOL Quarterly* 20: 463-494.
- \_\_\_\_\_ (1992). See how they read: Comprehension monitoring of L1 and L2 readers. *TESOL Quarterly* 26: 319-343.
- Brown, A. (1981). Metacognitive development and reading. In Spiro, R., Bruce, B. & Brewer, W. (Eds.), *Theoretical issues in reading comprehension*. Hillsdale: Lawrence Erlbaum Associates.
- Carrell, P. L. (1998). Metacognitive awareness and second language reading. *Modern Language Journal* 73: 120-134.
- Carrell, P. L., Pharis, B. G., & Liberto, J. C. (1989). Metacognitive strategy training for ESL reading. *TESOL Quarterly* 23: 647-678.
- Chamot, A., & Kupper, L. (1989). Learning strategies in foreign language instruction. *Foreign Language Annals* 22: 13-24.
- Cordero-Ponce, W.L. (2000). Summarization instruction on foreign language comprehension. *Reading Research and Instruction* 39 (4): 329-350.
- Cross, D. R., & Paris, S. (1988). Developmental and instructional analyses of children's metacognition and reading comprehension. *Journal of Educational Psychology* 1(2): 131.
- Devine, J. (1993). The role of metacognition in second language reading and writing. In G. Joanand L. I. Carson (Eds.), *Reading in the composition classroom, second language perspective*. (pp. 105-130). Boston: Heinle and Heinle Publishers.
- Flavell, J. H. (1981). Cognitive monitoring. In W. P. Dickson (Ed.), *Children's oral communication skills*. New York: Academic Press.
- Garner, R. & Kraus, C. (1982). Good and poor Comprehender differences in knowing and regulating reading behaviors. *Educational Research Quarterly* 6: 5-12.
- Grabe, W. (1991). Current Development in Second Language Reading Research. *TESOL Quarterly* 25(3): 375-406.
- Harris, K., Graham, S., & Freeman, S. (1988). "Effects of strategy training on metamemory among learning disabled students," *Exceptional Children* 54: 332-338.
- Huang, J., & Nisbet, D. (2012). Training adult ESL learners in metacognitive reading strategies. *Journal of Adult Education* 41(1): 1-7.
- Iwai, Y. (2007). Developing ESL/EFL Learners' Reading Comprehension of Expository Texts. *The Internet TESL Journal* 13(7): 1-5.

- Kern, R. (1989). Second language reading strategy instruction: its effects on comprehension and word inference ability, *Modern Language Journal* 73(2):135-149.
- Khonamri, F. & Ahmadi, M. (2014). The Impact of Metacognitive and Reading Comprehension Strategy Training on Iranian EFL learners' Reading Performance. *Standard Global Journal of Educational Research*1(3): 072- 075.
- Koda, K. (2005). *Insights into second language reading: A cross-linguistic approach*. Cambridge: Cambridge University Press.
- Koda, K. (2007). Reading and language learning: Crosslinguistic constraints on second language reading development. *Language Learning* 57(1): 1-44.
- Langer, J.A. (1984). Literacy instruction in American schools: Problems and perspectives. *American Journal of Education* 93 (1), 107-132.
- Mayer, R. E. (1998). Cognitive, metacognitive, and motivational aspects of problem solving. *Instructional Science* 26(1-2): 49-63.
- McCarthy, C. (1999). Reading theory as a microcosm of the four skills. *The Internet TESL Journal* 5(5): 49-57.
- Mokhtari, K., & C. Reichard. (2002). 'Assessing students' metacognitive awareness of reading strategies'. *Journal of Educational Psychology* 94: 249-59.
- Nunan, D. (1991). *Language teaching methodology: A textbook for teachers*. New York. Prentice Hall.
- O'Malley, J. M. (1987). The effects of training on the use of learning strategies on learning English as a second language. In A. Wenden & J. Rubin (Eds.), *Learning strategies in language learning*. (pp. 133- 144). Cambridge: Prentice Hall International.
- O'Malley, M. & Chamot, A. (1990). *Learning strategies in second language acquisition*. New York: Cambridge University Press.
- Paris, S. G., Wasik, B. A., & Turner, J. C. (1991). The development of strategies readers. In R. Barr, M. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research 2*. (pp. 609-640). Mahwah, NJ: Lawrence Erlbaum Associates.
- Pearson, P. D., Roehler, L. R., Dole, J. A., & Duffy, G. G. (1992). Developing expertise in reading comprehension. In S. J. Samuels & A. E. Farstrup (Eds.), *What research has to say about reading instruction*. (pp. 145-199). Newark, DE: IRA.
- Pressley, M. (2002). Metacognition and self-regulated instruction. In A. Farstrup & S. Samuels (Eds.), *What research has to say about reading instruction*. (3<sup>rd</sup> ed., pp. 291-309). Newark, DE: International Reading Association.
- Pressley, M., Borkowski, J. G. & Schneider, W. (1989). Good information processing: What is it and what education can do to promote it. *International Journal of Educational Research* 13: 857-867.

- Rumelhart, D. E. (1994). Toward an interactive model of reading. In R. B. Ruddell, M. R. Ruddell, & H. Singer (Eds.), **Theoretical models and processes of reading**. (pp. 864-894). Newark, DE, US: International Reading Association. (Reprinted from H. Singer et al (Eds.), "Theoretical Models and Processes of Reading (3rd ed.)," Newark, DE: International Reading Assn).
- Salataci, R., & Akyel, A. (2002). "Possible effects of strategy instruction on L1 and L2 reading." **Reading in a Foreign Language**. 14: 1-23.
- Sheorey, R., & Mokhtari, K. (2001). Differences in the metacognitive awareness of reading strategies among native and non-native readers. **System** 29: 431-449.
- Soleimani, H. & Hajghani, S. (2013). The Effect of Teaching Reading Comprehension Strategies on Iranian EFL Pre-University Students' Reading Comprehension Ability. **International Research Journal of Applied and Basic Sciences**. www.irjabs.com ISSN 2251-838X / 5 (5): 594-600.
- Takallou, F. (2011). The Effect of Metacognitive Strategy Instruction on EFL Learners' Reading Comprehension Performance and Metacognitive Awareness. **Asian EFL Journal** 2: 272-300.
- Tierney, J. E. (Ed.). (2005). **Reading Strategies and Practices**. (6<sup>th</sup> ed.). Boston, MA: Pearson Education, Inc.
- Tighe, E. L., & Schatschneider, C. (2014). A dominance analysis approach to determining predictor importance in third, seventh, and tenth grade reading comprehension skills. **Reading and Writing** 24: 101-127.
- Wagner, R.K. and Sternberg, R.J. (1984). Alternative conceptions of intelligence and their implications for education. **Review of Educational Research** 54(2): 179-223.
- Wallace, C. (2005). Critical reading in language education. **ELT Journal** 59 (3): 46-58.
- Wang, J. & Spencer, K. & Xing, M. (2009). Metacognitive beliefs and strategies in learning Chinese as a foreign language. **System** 37 (1): 45-56.
- Wellman, H. M. (1988). The early development of memory strategies. In F. Weiner & M. Perlmutter (Eds.), **Memory development: Universal changes and individual differences**. (pp. 3-29). Hillsdale, NJ: Erlbaum.
- Zhang, L. J. (2001). Awareness in reading: EFL students' metacognitive knowledge of reading strategies in an acquisition-poor environment. **Language Awareness** 10 (4): 268-288.
- \_\_\_\_\_. (2010). A dynamic metacognitive systems account of Chinese university students' knowledge about EFL reading. **TESOL Quarterly** 44(2): 320-353.